500SR-1 SERVICE MANUAL

PORTABLE TEST SETS

- PCM and Analog
- Level/frequency
- Noise
- Signaling
- Return loss

RACK MOUNT TEST SYSTEMS

- PCM and Analog
- Level/frequency
- Noise
- Return loss
- DVOM
- Signaling

ddi

DESIGN DEVELOPMENT INC.

490 Gianni Street, Santa Clara, CA 95054
Telephone: (408) 988-5200
A subsidiary of Metro-tel Corp.

CALIBRATION / SERVICE SPECIFICATION
GTE EQUIPMENT SERVICES

ITEM NAME: Signaling Set	SPEC NO:ESC- 0394-92-01
MANUFACTURER: Design Development I	DATE: 1-24-92
MODEL: 500SR-1	APPROVED:

CALIBRATION REQUIREMENTS

SOURCE: GTE NORTH	COPIES ISSUED:	MAXIMUM INTERVAL: 12 MONTHS

APPLICABLE PAGES FOR TECHNICIANS USE.

ALL PAGES ARE APPLICABLE.

MISCELLANEOUS NOTES.

REQUIRED CALIBRATION STICKER.

Calibration: X
Performance Check: ___
Limited Calibration: ___
Primary Standards: ___
Other: ___ (see misc. notes)

TAMPER PROOF SEAL REQUIRED.

YES X NO ___

If applicable

500 SR TEST PROCEDURE

1. Visual inspection.

2. 500 SR RCV test steps.

3. Setting as follows:

   A. Standard sender:
      1. Function to SF, off hook SEND.
      2. TLP to 0.0; 600 Ohm.
      3. E&M should be "OFF" hook position.

   B. 500 SR RCV:
      1. Level to AGC; 20 dB GAIN/NORMAL to "NORMAL."
      2. Input to L1.
      3. Function to SF.
      4. Reset to REM, MF error to OFF, CAMA MF-MF to OFF. Power to ON.
      5. Set min-pulse width to 30 MS.

4. Patch cord from SEND to L1 Jack. Note that input should be terminated with a 600 Ohm resistor.

5. Send a string of digits to the 500 SR Rev. Display should register all digits proper. L1 indicator should indicate on 2600 Hz.

   a. Repeat Step by using L2 & L1/L2. Then restore to L1.

6. Switch function of "SENDER" and "RCV" to MF. Reset switch to AUTO, MF error to ON, pulse width to 68 (+/-5).

7. Send digits to RCV. Digits should register proper starting with KP light and end with ST light. Note that the display will reset itself everytime a new train of digits arrive. If reset switch is in MAN mode, only KP and ST will register.

   a. Repeat steps for input L2/L1/L2, then restore to L1.

8. RCV level to MAN mode. Display should work at -3 dB (+2).

9. Set 20 dB GAIN/NORM to 20 dB GAIN, TLP to -16. Digits should register proper at -19 dB (+/-1).

10. Reset SEND and RCV function to TT. TLP to 0.0, pulse width to 53 MS (+5), MF error and CAMA MF-FM to OFF, 20 dB gain to NORMAL. Repeat steps 8 & 9.

11. Select DP on RCV and SEND. CAMA MF-MF to DP-MF. Connect patch cord through dialing wet loop model #001. Send a group of digits in. They should register proper. Note that 600 Ohm resistor is not connected to the input. Remove cord from Model #001.

12. On RCV E&M select E; on SEND, E switch to off hook connect patch cord from E&M jack of SEND to E jack of RCV. Send digits to RCV. (Watch for digits to display correctly).

13. Repeat Step 12 for M Function.

14. Miscellaneous:

    A. Check all function on Opt 3A, all jacks, and all indicators to work properly.

500SR FRONT PANEL ASSEMBLY (6700-1011)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0003	REV #3	1
-	1005-1004	RES,POT,5 K	1
-	1005-1005	RES,POT,5 K,+50 K	1
-	1005-1006	RES,POT,5K,VOLUME	2
-	2000-1000	ELEC,SW,DBL POST	2
-	2000-1002	ELEC,SW,SGL POST	1
-	2000-1003	ELEC,SW,DPDT MOMENTARY	1
-	2000-1004	ELEC,SW,DPDT ON/ON/ON	1
-	2000-1201	ELEC,MISC,310 JACK	7
-	2000-1203	ELEC,MISC,BLACK BINDING	1
-	2000-1505	ELEC,MISC,KNOBS	2
-	2000-1513	ELEC,MISC,CAL RAD SPEAKER	1
-	2000-1535	ELEC,MISC,500SR KNOBS	2
-	3000-1011	SM,FP,500SR	1
-	3004-1060	SM,MISC,500SR PLEX WINDOW	1
-	2000-1709	WIRE,SPOOL,BLACK	1
-	2000-1710	WIRE,SPOOL,GREEN	1
-	2000-1711	WIRE,SPOOL,RED	1
-	2000-1712	WIRE,SPOOL,SLATE	1
-	3900-1714	WIRE,S&T,GREEN 6	13
-	3900-1715	WIRE,S&T,GREY,6	9
-	3900-1716	WIRE,S&T,BLK,6	1
-	2013-1000	HWD,5/8 X 5/8	3
-	2006-1000	HWD,6-32 X 5/16	9
-	2007-1001	HWD,4-40 X 1/4	2
-	2002-1004	HWD,6-32 X 5/16	2
-	2009-1002	HWD,3/8 X 1/2	2
-	2011-1002	HWD,6-32 X 7/16	4
-	2010-1002	HWD,3/8 X 5/8	7
-	2000-1537	ELEC,MISC,CABLE TIE MOUNT	1
-	2000-1521	ELEC,MISC,5.5	1
-	6740-3003	ASY,PCB,500SR DISPLAY	1
-	6740-3001	ASY,PCB,500SR MOTHER	1

500SR OPTION 3 FRONT PANEL (6700-1020)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	2000-1567	ELEC,MISC,YELLOW LED HOLD	1
-	2000-1000	ELEC,SW,DBL POST	2
-	2000-1010	ELEC,SW,SINGLE POLE ROTAR	1
-	2000-1011	ELEC,SW,DOUBLE POLE ROTAR	1
-	2000-1012	ELEC,MISC,SENDER PEYPAD	1
-	2000-1201	ELEC,MISC,310 JACK	1
-	2000-1565	ELEC,MISC,8 PIN CONNECTOR	1
-	2000-1566	ELEC,MISC,500SR OPTION 3A	2
-	3000-1020	SM,FP,500SR OPT 3 PLATE	1
-	2010-1000	HWD,3/8 X 5/8	1
CR10	1084-4683	SEMI,DIOD,LED LARGE YELLO	1

500SR OPTION 3A FRONT PANEL (6700-1021)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	2000-1000	ELEC,SW,DBL POST	2
-	2000-1007	ELEC,SW,LEVER,500SR	2
-	2000-1010	ELEC,SW,SINGLE POLE ROTAR	1
-	2000-1011	ELEC,SW,DOUBLE POLE ROTAR	1
-	2000-1012	ELEC,MISC,SENDER PEYPAD	1
-	2000-1201	ELEC,MISC,310 JACK	4
-	2000-1565	ELEC,MISC,8 PIN CONNECTOR	1
-	2000-1566	ELEC,MISC,500SR OPTION 3A	2
-	2000-1567	ELEC,MISC,YELLOW LED HOLD	1
-	2000-1568	ELEC,MISC,RED LED HOLDER	2
-	2009-1003	HWD,TINNERMAN NUT	4
-	2010-1000	HWD,3/8 X 5/8	4
-	3000-1021	SM,FP,500SR,OPT 3A PLATE	1
-	3004-1021	SM,MISC,23	2
CR10	1084-4683	SEMI,DIOD,LED LARGE YELLO	1
CR46,47	1084-4682	SEMI,DIOD,LED LARGE RED	2

500SR REAR PANEL PARTS LIST (6710-1006)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	1102-0323	SEMI,IC,LM323K	1
-	1140-1004	ELEC,MISC,500SR X-FORMER	1
-	2000-1401	ELEC,MISC,FUSE HOLDER	1
-	2000-1406	ELEC,MISC,1 1/2AMP SLOW B	1
-	2000-1506	ELEC,MISC,CORD STRAIN REL	1
-	2000-1508	ELEC,MISC,500SR TERM STRI	1
-	2000-1532	ELEC,MISC,CORD AC LINE	1
-	3001-1006	SM,RP,500SR	1
-	3004-1043	SM,MISC,100P/100P-4/500SR	1

500SR CHASSIS ASSEMBLY PARTS LIST (6720-1006)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	2000-1510	ELEC,MISC,CONNECTOR 30PIN	1
-	2000-1512	ELEC,MISC,CARD GUIDE	2
-	2002-1002	HWD,4-40 X 1/2	2
-	2002-1005	HWD,6-32 X 5/16	7
-	2007-1001	HWD,1-40 X 1/4	2
-	3002-1006	SM,CH,500SR CASE	1
-	3004-1010	SM,MISC,500SR INSIDE WALL	1
-	3004-1014	SM,MISC,500SR CARD CAGE	2
-	3004-1015	SM,MISC,500SR CARD CAGE B	2
-	3004-1022	SM,MISC,500SR INSIDE WALL	1

500SR MOTHER PCB PARTS LIST (6740-3001)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
	0002	REV #2	1
-	2000-1727	WIRE,500SR 17 CONDUCTOR	1
-	2000-1728	WIRE,500SR 15 CONDUCTOR	1
-	2700-1114	SW,500SR P.B.S.	1
-	2000-1516	ELEC,MISC,CONNECTOR,44 PI	2
-	2000-1525	ELEC,MISC,CONNECTOR 30 PI	5
-	3400-3001	PCB,500SR MOTHER	1
C1,2,5,	1053-1001-R	CAP,ELEC,1000UF,25V,RADIA	3
C11,12,29	1055-0220	CAP,MYL,.22UF,100V	3
C13.14	1050-1001	CAP,MICA,1000 PF,5%	2
C15,24,3,4,7,22,23,27	1052-0100	CAP,TANT,10UF,25V	8
C16,17,18,19	1056-0100	CAP,PYES,.01UF,10%,50V	4
C20,21,26	1052-1520	CAP,TANT,15UF,20V	3
C200,201,28,30	1052-0100	CAP,TANT,10UF,25V	4
C25	1050-0220	CAP,MICA,22 PF,5%	1
C31	1050-0300	CAP,MICA,30 PF,5%	1
C32	1054-0010	CAP,CER,.01UF,100V	1
C6	1053-4700	CAP,ELEC,4700UF,16V	1
CR1,2,3,4	1081-4004	SEMI,DIOD,1N4004	4
CR14,15,16,17,18,19	1080-4446	SEMI,DIOD,1N4446	6
CR201,202,204,205,200	1080-4446	SEMI,DIOD,1N4446	5
CR210	1080-4446	SEMI,DIOD,1N4446	1
CR5,6	1081-4721	SEMI,DIOD,1N4721	2
CR7,8,9,10,11,12,13	1080-4446	SEMI,DIOD,1N4446	7
K200,201	2000-1301	ELEC,MISC,RELAY RA3031-10	2
Q1,2,5,7,15	1094-5245	SEMI,TRAN,2N5245	5
Q203,204,201	1090-3565	SEMI,TRAN,2N3565	3
Q3	1090-2223	SEMI,TRAN,2N2222A	1
Q4	1091-2907	SEMI,TRAN,2N2907	1
Q6,14	1095-5461	SEMI,TRAN,2N5461	2
Q8,9,10,11,12,13,202	1090-3565	SEMI,TRAN,2N3565	7
R1,2	1000-4701	RES,5%,1/4W,4.7 K	2
R14	1001-9091	RES,1%,1/4W,9.09 K	1
R15	1003-2001	RES,POT,1/2W,2 K,1T	1
R20	1000-2003	RES,5%,1/4W,200 K	1
R200	1000-2401	RES,5%,1/4W,2.4 K	1
R204,205,220,221,216	1000-1002	RES,5%,1/4W,10 K	5
R209,222	1000-1002	RES,5%,1/4W,10 K	2
R21,22	1000-3300	RES,5%,1/4W,330 OHM	2
R210,211,212,217,208	1000-1002	RES,5%,1/4W,10 K	5
R215,214,213,206,207	1000-1002	RES,5%,1/4W,10 K	5
R223	1001-1053	RES,1%,1/4W,105 K	1
R224	1001-1003	RES,1%,1/4W,100 K	1
R225	1001-1101	RES,1%,1/4W,1.1 K	1
R226	1001-1152	RES,1%,1/4W,11.5 K	1
R228,227,201	1000-1001	RES,5%,1/4W,1 K	3
R23	1000-3301	RES,5%,1/4W,3.3 K	1
R26,M28,46,82	1000-1004	RES,5%,1/4W,1 M	4
R29	1001-4991	RES,1%,1/4W,4.99 K	1
R3,10	1001-9092	RES,1%,1/4W,90.9 K	2

500SR MOTHER PCB PARTS LIST (6740-3001)

REFERENCE DES.	DII PART #	DESCRIPTION	QUANTITY
R30,67,73,80	1003-5001	RES,POT,1/2W,5 K,1T	4
R31	1001-3742	RES,1%,1/4W,37.4 K	1
R32	1001-7502	RES,1%,1/4W,75 K	1
R35	1001-4642	RES,1%,1/4W,46.4 K	1
R36	1001-3482	RES,1%,1/4W,34.8 K	1
R37,38	1001-6982	RES,1%,1/4W,69.8 K	2
R4,6,7,25,11,13,27	1001-1002	RES,1%,1/4W,10 K	7
R41,43	1001-1620	RES,1%,1/4W,162 OHM	2
R42,44	1001-5111	RES,1%,1/4W,5.11 K	2
R47	1000-3901	RES,5%,1/4W,3.9 K	1
R48	1000-3000	RES,5%,1/4W,300 OHM	1
R5,12,40,45,68,72	1001-1622	RES,1%,1/4W,16.2 K	6
R50	1000-1501	RES,5%,1/4W,1.5 K	1
R51	1000-4700	RES,5%,1/4W,470 OHM	1
R52,53	1000-4702	RES,5%,1/4W,47 K	2
R54	1000-1504	RES,5%,1/4W,1.5 M	1
R55,58	1001-3321	RES,1%,1/4W,3.32 K	2
R56,57,62	1001-1501	RES,1%,1/4W,1.5 K	3
R60,34	1001-1001	RES,1%,1/4W,1 K	2
R61,59,62	1001-2211	RES,1%,1/4W,2.21 K	3
R64,65	1001-1210	RES,1%,1/4W,121 OHM	2
R66	1001-6811	RES,1%,1/4W,6.81 K	1
R69	1000-4704	RES,5%,1/4W,4.7 MEG	1
R70	1000-3904	RES,5%,1/4W,3.9 MEG	1
R71,49	1000-1003	RES,5%,1/4W,100 K	2
R8,9,17,16,202,203	1000-1002	RES,5%,1/4W,10 K	6
R81	1000-0100	RES,5%,1/4W,10 OHMS	1
T1,T2	3600-1000	XFMR,IN/OUT D14934	2
U1	1110-0301	SEMI,IC,LM301AN	1
U10	1115-4157	SEMI,IC,DM74LS157N	1
U3,4	1110-4136	SEMI,IC,4136	2
U8.9	1112-4049	SEMI,IC,CD4049AE	2
VR1	1100-7812	SEMI,IC,78M12,VOLT REG	1
VR1,VR2	2003-1001	HWD,4-40 X 3/8	2
VR1,VR2	2007-1001	HWD,4-40 X 1/4	2
VR2	2000-1546	ELEC,MISC,MICA INSULATOR	2
VR2	1101-7912	SEMI,IC,79M12,VOLT REG	1
VR2	2012-1000	HWD,4 X 1/16	1

500SR TT DECODER PCB PARTS LIST (6740-3002)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUNATITY
-	0002	REV #2	1
-	3400-3002	PCB,500SR TT DECODER	1
C1,2,3,4	1054-0100	CAP,CER,.1UF,10V	4
Q1,2	1090-3565	SEMI,TRAN,2N3565	2
R1,2,3,4,5,6,7,8,9,1C	1000-1002	RES,5%,1/4W,10 K	10
R11	1000-1002	RES,5%,1/4W,10 K	1
R13,14	1000-6800	RES,5%,1/4W,680 OHM	2
U1,2,3,7,11	1113-7400	SEMI,IC,DM7400N	5
U10	1113-7432	SEMI,IC,DM7432N	1
U12	1113-4260	SEMI,IC,SN74260N	1
U13,16,15	1113-7406	SEMI,IC,DM7406N	3
U14	1113-4174	SEMI,IC,DM74174N	1
U17	1113-7474	SEMI,IC,DM7474N	1
U4,9	1112-4531	SEMI,IC,MC14531BCP	2
U5	1113-7430	SEMI,IC,DM7430N	1
U6	1113-7420	SEMI,IC,DM7420N	1
U8	1112-4078	SEMI,IC,CD4078AE	1

500SR DISPLAY PCB PARTS LIST (6740-3003)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
0	0002	REV #2	1
0	3400-3003	PCB,500SR DISPLAY	1
C1	1054-0005	CAP,CER,.005UF,100V	1
C2,3	1052-0100	CAP,TANT,10UF,25V	2
C4,5,6,7,8	1054-0100	CAP,CER,.1UF,10V	5
CR1,2,3,4,5,6,7,8,9	1084-7760	SEMI,DIOD,LED,7760 8 LITT	9
CR10,11,12,13,14,15	1084-7760	SEMI,DIOD,LED,7760 8 LITT	6
CR16,17,18,19,20,21	1084-7760	SEMI,DIOD,LED,7760 8 LITT	6
CR22	1084-7760	SEMI,DIOD,LED,7760 8 LITT	1
CR23,24,25,26,27,28	1084-4684	SEMI,DIOD,LED INDICATOR	6
CR29,30,31,32,33,34	1084-4684	SEMI,DIOD,LED INDICATOR	6
CR35,36,37,38,39,40	1084-4684	SEMI,DIOD,LED INDICATOR	6
CR41,42,43,44,45,46	1084-4684	SEMI,DIOD,LED INDICATOR	6
CR47	1084-4684	SEMI,DIOD,LED INDICATOR	1
R1,12	1000-1002	RES,5%,1/4W,10 K	2
R13,14,15,16	1000-6800	RES,5%,1/4W,680 OHM	4
R3,4,5,6,7,8,9,10,11	1000-6800	RES,5%,1/4W,680 OHM	9
U,12,3,4,5,6,7,8,9,10	1113-9368	SEMI,IC,F9368PC	10
U11,12,13,14,15,16,17	1113-9368	SEMI,IC,F9368PC	7
U18,19,20,21,22	1113-9368	SEMI,IC,F9368PC	5
U23,24,25,26,27,28	1112-4043	SEMI,IC,CD4043AE	6
U29,30,31,32,33,34,35	1115-7405	SEMI,IC,DM7405N	7
U36	1115-7405	SEMI,IC,DM7405N	1
U37	1112-4024	SEMI,IC,CD4024AE	1
U38,39,40,41	1112-4028	SEMI,IC,CD4028AE	4
U42,43,44,45,46,47	1112-4081	SEMI,IC,CD4081AE	6
U48	1112-4001	SEMI,IC,CD4001AE	1

500SR SF FILTER PCB PARTS LIST (6740-3004)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
0	0002	REV #2	1
0	3400-3004	PCB,500SR FILTER MF-SF-TT	1
C1,1A,1B,1C	1054-0010	CAP,CER,.01UF,100V	4
C2,2A,2B,2C,3,3A,3B	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C3C,4,4A,4B,4C,5,5A	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C5B,5C	1058-0100	CAP,PYCA,.01UF,2%,50V	2
C6,6A,6B,6C	1052-0010	CAP,TANT,1UF,35V	4
C7,7A,7B,7C,8,8A,8B	1052-0001	CAP,TANT,.1UF,35V	7
C9,10	1052-0100	CAP,TANT,10UF,25V	2
CR1,1A,1B,1C,2 2A,2B	1080-4446	SEMI,DIOD,1N4446	7
CR1,1A,1B,1C,2 2A,2B	1080-4446	SEMI,DIOD,1N4446	7
CR2C,3,3A,3B,3C	1080-4446	SEMI,DIOD,1N4446	5
Q1,1A,1B,1C	1090-3565	SEMI,TRAN,2N3565	4
R1,1A,1B,1C,8,8A,8B	1001-1003	RES,1%,1/4W,100 K	7
R10B,10C	1001-7871	RES,1%,1/4W,7.87 K	2
R12A,12B,12C	1008-1001	RES,POT,1/4W,1 K,25T	3
R13C,14C	1001-5901	RES,1%,1/4W,5.9 K	2
R14B	1001-6341	RES,1%,1/4W,6.34 K	1
R15,15A,15B,15C	1004-2002	RES,POT,3/4W,20 K,15T	4
R16,16A,16B,16C	1000-1000	RES,5%,1/4W,100 OHM	4
R17,17A,17B,17C	1000-1004	RES,5%,1/4W,1 M	4
R18,18A,18C,18B,19	1000-1003	RES,5%,1/4W,100 K	5
R19A,19B,19C,20,20A	1000-1003	RES,5%,1/4W,100 K	5
R2,2A,2B,2C,9 9A,9B	1001-4421	RES,1%,1/4W,4.42 K	7
R20B,20C,21,2 A,21B	1000-1003	RES,5%,1/4W,100 K	5
R21C,22,22A,22B,22C	1000-1003	RES,5%,1/4W,100 K	5
R3,3A,3B,3C,10,10A	1001-7871	RES,1%,1/4W,7.87 K	6
R4,4A,4B,4C,5,5A,5B	1008-1001	RES,POT,1/4W,1 K,25T	7
R5C,11,11A,11B,11C,12	1008-1001	RES,POT,1/4W,1 K,25T	6
R6,7,6B,7B,13,14,13B	1001-6341	RES,1%,1/4W,6.34 K	7
R6A,7A,6C,7C,13A,14A	1001-5901	RES,1%,1/4W,5.9 K	6
R8C	1001-1003	RES,1%,1/4W,100 K	1
R8C	1052-0001	CAP,TANT,.1UF,35V	1
R9C	1001-4421	RES,1%,1/4W,4.42 K	1
U1,1A,1B,1C	1110-4136	SEMI,IC,4136	4

500SR E&M LOOP PCB PARTS LIST (6740-3005)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
0	0002	REV #2	1
0	3400-3005	PCB,500SR LOOP E & M	1
C1,2	1056-0150	CAP,PYES,.015UF,10%	2
C10,11,13	1052-0100	CAP,TANT,10UF,25V	3
C14	1052-1520	CAP,TANT,15UF,20V	1
C15,51	1052-0047	CAP,TANT,4.7UF,35V	2
C22	1050-1001	CAP,MICA,1000 PF,5%	1
C3,8,20,21	1052-0010	CAP,TANT,1UF,35V	4
C4	1054-0100	CAP,CER,.1UF,10V	1
C5	1056-0047	CAP,PYES,.0047UF	1
C50	1055-0100	CAP,MYL,.10UF,100V	1
C6	1055-0270	CAP,MYL,.27UF,100V	1
C60	1054-0005	CAP,CER,.005UF,100V	1
C7	1050-2000	CAP,MICA,200 PF,5%	1
C9,16,17,61	1054-0010	CAP,CER,.01UF,100V	4
CR1,2,4,100,101,102	1080-4446	SEMI,DIOD,1N4446	6
CR103,50,8,9,20,21,22	1080-4446	SEMI,DIOD,1N4446	7
CR104,105,106,107	1082-0751	SEMI,DIOD,1N751A,ZENER,5.	4
CR23,10,16,17,18,19,5	1080-4446	SEMI,DIOD,1N4446	7
CR51	1080-4446	SEMI,DIOD,1N4446	1
CR6,7,11,12,13,14,15	1080-4446	SEMI,DIOD,1N4446	7
Q1,10,50	1091-4249	SEMI,TRAN,2N4249	3
Q11,12,13,14,15,16,19	1090-3565	SEMI,TRAN,2N3565	7
Q20,21,22,23,24,8	1090-3565	SEMI,TRAN,2N3565	6
Q7,9,17,18,4,5,2,3,6	1090-3565	SEMI,TRAN,2N3565	9
R100	1000-1002	RES,5%,1/4W,10 K	1
R12	1001-9091	RES,1%,1/4W,9.09 K	1
R13,14,15,29,30,31,32	1000-1002	RES,5%,1/4W,10 K	7
R16	1001-5902	RES,1%,1/4W,59 K	1
R17	1000-8202	RES,5%,1/4W,82 K	1
R18	1001-1583	RES,1%,1/4W,158 K	1
R19,43,57,47	1000-2702	RES,5%,1/4W,27 K	4
R20	1000-1503	RES,5%,1/4W,150 K	1
R21	1001-2673	RES,1%,1/4W,267 K	1
R22	1001-2613	RES,1%,1/4W,261 K	1
R23	1001-1333	RES,1%,1/4W,133 K	1
R24,26,41,58,59,61,48	1000-1002	RES,5%,1/4W,10 K	7
R25,49,83,85	1000-2201	RES,5%,1/4W,2.2 K	4
R34,44	1000-1803	RES,5%,1/4W,180 K	2
R36,38,40,68,73,99,97	1000-1002	RES,5%,1/4W,10 K	7
R39,69,74,28	1000-6800	RES,5%,1/4W,680 OHM	4
R42,92,1,5	1000-1003	RES,5%,1/4W,100 K	4
R45	1001-2373	RES,1%,1/4W,237 K	1
R50,51,77	1001-1003	RES,1%,1/4W,100 K	3
R55	1000-7501	RES,5%,1/4W,7.5 K	1
R56	1000-4702	RES,5%,1/4W,47 K	1
R6	1001-5111	RES,1%,1/4W,5.11 K	1
R60	1001-1912	RES,1%,1/4W,19.1 K	1
R62	1000-4704	RES,5%,1/4W,4.7 MEG	1
R63,65,70,72	1000-2203	RES,5%,1/4W,220 K	4

500SR E&M LOOP PCB PARTS LIST (6740-3005)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
R64	1000-2202	RES,5%,1/4W,22 K	1
R66,71	1000-1004	RES,5%,1/4W,1 M	2
R67,91	1000-5102	RES,5%,1/4W,51 K	2
R7,11,27,33,98,35,37	1000-1003	RES,5%,1/4W,100 K	7
R75,86,88,89,90	1000-1002	RES,5%,1/4W,10 K	5
R76	1000-0680	RES,5%,1/4W,68 OHM	1
R78	1000-1001	RES,5%,1/4W,1 K	1
R79,80,84	1000-3901	RES,5%,1/4W,3.9 K	3
R8,10	1001-2873	RES,1%,1/4W,287 K	2
R81	1000-3301	RES,5%,1/4W,3.3 K	1
R82	1001-4640	RES,1%,1/4W,464 OHM	1
R87	1001-1582	RES,1%,1/4W,15.8 K	1
R9	1001-2371	RES,1%,1/4W,2.37 K	1
R93	1001-3321	RES,1%,1/4W,3.32 K	1
R94,46	1000-0820	RES,5%,1/4W,82 OHM	2
R95	1000-5601	RES,5%,1/4W,5.6 K	1
R96	1000-3302	RES,5%,1/4W,33 K	1
U1,2,3	1110-4136	SEMI,IC,4136	3
U11	1111-0555	SEMI,IC,LM555CN	1
U4	1113-4123	SEMI,IC,74123N	1
U5	1113-7410	SEMI,IC,DM7410N	1
U6	1113-7493	SEMI,IC,7493N	1
U7	1113-4260	SEMI,IC,SN74260N	1
U8,9,10	1113-7401	SEMI,IC,DM7401N	3

500SR ERROR DETECTOR PCB (6740-3006)

REFERENCE DES.	DDI PART#	DESCRIPTION	QUANTITY
0	0003	REV #3	1
0	3400-3006	PCB,500SR,ERROR DETECTOR	1
C1,2	1055-0470	CAP,MYL,.47UF,100V	2
C14,15,16,18,19,20	1054-0100	CAP,CER,.1UF,10V	6
C3,11,12	1052-004[illegible]	CAP,TANT,4.7UF,35V	3
C4,17,21	1052-001[illegible]	CAP,TANT,1UF,35V	3
C5	1050-8200	CAP,MICA,820 PF,5%	1
C6,7,13	1052-0100	CAP,TANT,10UF,25V	3
C8	1055-0100	CAP,MYL,.10UF,100V	1
C9,10	1050-1001	CAP,MICA,1000 PF,5%	2
CR1,2,3,4,5,6,7	1080-4446	SEMI,DIOD,1N4446	7
Q1,2,3	1090-3565	SEMI,TRAN,2N3565	3
R1,8,17,19	1000-5101	RES,5%,1/4W,5.1 K	4
R10	1003-1002	RES,POT,1/2W,10 K,1T	1
R11	1001-6192	RES,1%,1/4W,61.9 K	1
R13	1001-3162	RES,1%,1/4W,31.6 K	1
R16,21	1000-1002	RES,5%,1/4W,10 K	2
R2	1001-5112	RES,1%,1/4W,51.1 K	1
R20	1001-1962	RES,1%,1/4W,19.6 K	1
R22	1001-1472	RES,1%,1/4W,14.7 K	1
[illegible]	1001-681[illegible]	RES,1%,1/4W,6.81 K	1
[illegible]	1001-2152	RES,1%,1/4W,21.5 K	1
R5	1001-6812	RES,1%,1/4W,68.1 K	1
R6,18	1001-1002	RES,1%,1/4W,10 K	2
R7,25,23,9,12,14,15	1000-1002	RES,5%,1/4W,10 K	7
U1	1113-7427	SEMI,IC,DM7427N	1
U10	1113-7490	SEMI,IC,7490N	1
U11,12	1113-7406	SEMI,IC,DM7406N	2
U13	1113-4174	SEMI,IC,DM74174N	1
U14	1113-7413	SEMI,IC,7413N	1
U15,23	1113-4123	SEMI,IC,74123N	2
U16	1113-4121	SEMI,IC,DM74121N	1
U17	1113-7404	SEMI,IC,DM7404N	1
U18	1113-4260	SEMI,IC,SN74260N	1
U2,19,22	1113-7401	SEMI,IC,DM7401N	3
U20,21	1113-7474	SEMI,IC,DM7474N	2
U24	1110-0301	SEMI,IC,LM301AN	1
U3,5	1113-9602	SEMI,IC,DM9602N	2
U4,6	1113-7400	SEMI,IC,DM7400N	2
U7	1113-7402	SEMI,IC,DM7402N	1
U8	1111-0555	SEMI,IC,LM555CN	1
U9	1113-7472	SEMI,IC,DM7472N	1

500SR MF DECODER PCB PARTS LIST (6740-3007)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
0	0002	REV #2	1
0	3400-3007	PCB,500SR MF DECODER	1
C1	1052-0100	CAP,TANT,10UF,25V	1
C2,3,4	1054-0100	CAP,CER,.1UF,10V	3
Q1,2	1090-3565	SEMI,TRAN,2N3565	2
R1,2,3,4,5,6,8,15	1000-1002	RES,5%,1/4W,10 K	8
R10,11,12,13,14	1000-6800	RES,5%,1/4W,680 OHM	5
R18,20	1000-1002	RES,5%,1/4W,10 K	2
R7,9,16	1000-1201	RES,5%,1/4W,1.2 K	3
U1	1113-7404	SEMI,IC,DM7404N	1
U11	1113-7430	SEMI,IC,DM7430N	1
U12	1113-7420	SEMI,IC,DM7420N	1
U13,17,18,19	1113-7400	SEMI,IC,DM7400N	4
U14	1112-4078	SEMI,IC,CD4078AE	1
U2,3,4,5,6	1113-7410	SEMI,IC,DM7410N	5
U20,21,22	1113-7406	SEMI,IC,DM7406N	3
U7,8,9,10,15,16	1113-7432	SEMI,IC,DM7432N	6

500SR OPTION 3 PCB PARTS LIST (6740-3008)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0003	REV #3	1
0	3400-3008	PCB,500SR,OPTION 3	1
C1	1050-0200	CAP,MICA,20 PF,5%	1
C101	1053-1001-A	CAP,ELEC,1000UF,25V,AXIAL	1
C102,103	1053-1000-A	CAP,ELEC,100UF,25V,AXIAL	2
C104,105,106,107,108	1052-0100	CAP,TANT,10UF,25V	5
C109	1052-0100	CAP,TANT,10UF,25V	1
C2	1052-0220	CAP,TANT,22UF,15V	1
C3,110,111	1054-0100	CAP,CER,.1UF,10V	3
C4	1054-0010	CAP,CER,.01UF,100V	1
C5	1050-1000	CAP,MICA,100 PF,5%	1
C6	1052-0010	CAP,TANT,1UF,35V	1
C7,8	1055-0010	CAP,MYL,.01UF,100V	2
C9	1059-1568	CAP,NPLPL,20UF,300V	1
CR1,2,3,4	1080-4446	SEMI,DIOD,1N4446	4
CR10,11,12	1084-4684	SEMI,DIOD,LED INDICATOR	3
CR5,6,7,8	1081-4004	SEMI,DIOD,1N4004	4
CR9	1082-5265	SEMI,DIOD,1N5265B,ZENER,6	1
Q1	1090-3565	SEMI,TRAN,2N3565	1
Q2	1092-1031	SEMI,TRAN,TIP 31C	1
Q3	1090-5401	SEMI,TRAN,2N5401	1
	1090-3440	SEMI,TRAN,2N3440	1
R1,2,33	1000-4701	RES,5%,1/4W,4.7 K	3
R10	1001-1003	RES,1%,1/4W,100 K	1
R11	1001-5622	RES,1%,1/4W,56.2 K	1
R12	1001-5621	RES,1%,1/4W,5.62 K	1
R13,22,27,29	1001-2002	RES,1%,1/4W,20 K	4
R14	1001-8451	RES,1%,1/4W,8.45 K	1
R15	1001-2491	RES,1%,1/4W,2.49 K	1
R17,19	1001-5901	RES,1%,1/4W,5.9 K	2
R20,30	1003-5001	RES,POT,1/2W,5 K,1T	2
R23	1001-5620	RES,1%,1/4W,562 OHM	1
R24	1003-2000	RES,POT,1/2W,200 OHM,1T	1
R25	1001-7501	RES,1%,1/4W,7.5 K	1
R26	1003-1001	RES,POT,1/2W,1 K,1T	1
R3	1001-1000	RES,1%,1/4W,100 OHM	1
R31	1001-5360	RES,1%,1/4W,536 OHM	1
R32	1001-3010	RES,1%,1/4W,301 OHM	1
R34,36	1000-1005	RES,5%,1/4W,10 MEG	2
R35,38	1000-1001	RES,5%,1/4W,1 K	2
R37	1000-0430	RES,5%,1/4W,43 OHM	1
R4,5	1001-1001	RES,1%,1/4W,1 K	2
R40	1003-2002	RES,POT,1/2W,20 K,1T	1
R41,39	1000-3300	RES,5%,1/4W,330 OHM	2
R6,7,9,16,18,21,28	1001-1002	RES,1%,1/4W,10 K	7
R8	1001-1212	RES,1%,1/4W,12.1 K	1
RN1,2	1014-1002	RES,NETWORK,10 K,8-PIN	2
T1	3600-1000	XFMR,IN/OUT D14934	1
U1	1119-8085	SEMI,IC,P8085AH	1
U10	1112-4081	SEMI,IC,CD4081AE	1

500SR OPTION 3 PCB PARTS LIST (6740-3008)

REFERENCE DES.	ODI PART #	DESCRIPTION	QUANTITY
U11	1112-4069	SEMI,IC,CD4069	1
U12	1120-0820	SEMI,IC,FCD 820	1
U2	1119-8156	SEMI,IC,P8156H	1
U3	1119-8212	SEMI,IC,D8212	1
U4	1119-2716	SEMI,IC,D2716P	1
U5	1118-0800	SEMI,IC,DAC08EQ	1
U6	1110-0356	SEMI,IC,356	1
U7,8	1110-1458	SEMI,IC,1458	2
U9	1113-7498	SEMI,IC,74LS32	1
VR101	1102-7805	SEMI,IC,7805 HIGH,VOLT RE	1
VR102	1100-7812	SEMI,IC,78M12,VOLT REG	1
VR103	1101-7912	SEMI,IC,79M12,VOLT REG	1
Y1	1141-1007	ELEC,MISC,6.144 MHZ CRYST	1

500SR MF FILTER PCB PARTS LIST (6741-3004)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
0	3400-3004	PCB,500SR FILTER MF-SF-TT	1
C1,1A,1B,1C,1D,1E	1054-0010	CAP,CER,.01UF,100V	6
C2,2A,2B,2C,2D,2E,3	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C3A,3B,3C,3D,3E,4,4A	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C4B,4C,4D,4E,5,5A,5B	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C5C,5D,5E	1058-0100	CAP,PYCA,.01UF,2%,50V	3
C6,6A,6B,6C,6D,6E	1052-0010	CAP,TANT,1UF,35V	6
C7,7A,7B,7C,7D,7E,8	1052-0001	CAP,TANT,.1UF,35V	7
C8A,8B,8C,8D,8E	1052-0001	CAP,TANT,.1UF,35V	5
C9,10	1052-0100	CAP,TANT,10UF,25V	2
CR1,1A,1B,1C,1D,1E,2	1080-4446	SEMI,DIOD,1N4446	7
CR2A,2B,2C,2D,2E,3,3A	1080-4446	SEMI,DIOD,1N4446	7
CR3B,3C,3D,3E	1080-4446	SEMI,DIOD,1N4446	4
Q1,1A,1B,1C,1D,1E,2	1090-3565	SEMI,TRAN,2N3565	7
Q2A,2B,2C,2D,2E	1090-3565	SEMI,TRAN,2N3565	5
R1,1A,1B,1C,1D,1E,8	1001-1003	RES,1%,1/4W,100 K	7
R10A,10B,10C,10D,10E	1001-7871	RES,1%,1/4W,7.87 K	5
R11A,11B,11C,11D,11E	1008-1001	RES,POT,1/4W,1 K,25T	5
R12,12A,12B,12C,12D	1008-1001	RES,POT,1/4W,1 K,25T	5
R12E	1008-1001	RES,POT,1/4W,1 K,25T	1
13,14	1001-2152	RES,1%,1/4W,21.5 K	2
R13A,14A	1001-1692	RES,1%,1/4W,16.9 K	2
R13B,14B	1001-1372	RES,1%,1/4W,13.7 K	2
R13C,14C	1001-1152	RES,1%,1/4W,11.5 K	2
R13D,14D	1001-1022	RES,1%,1/4W,10.2 K	2
R13E,14E	1001-8871	RES,1%,1/4W,8.87 K	2
R15,15A,15B,15C,15D	1004-2002	RES,POT,3/4W,20 K,15T	5
R15E	1004-2002	RES,POT,3/4W,20 K,15T	1
R16,16A,16B,16C,16D	1000-1000	RES,5%,1/4W,100 OHM	5
R16E	1000-1000	RES,5%,1/4W,100 OHM	1
R17,17A,17B,17C,17D	1000-1004	RES,5%,1/4W,1 M	5
R17E	1000-1004	RES,5%,1/4W,1 M	1
R18,18A,18B,18C,18D	1000-1003	RES,5%,1/4W,100 K	5
R18E,19A,19,19B,19C	1000-1003	RES,5%,1/4W,100 K	5
R19D,19E,20C20A,20B	1000-1003	RES,5%,1/4W,100 K	5
R2,2A,2B,2C,2D,2E,9	1001-4421	RES,1%,1/4W,4.42 K	7
R20C,20D,20E,21,21A	1000-1003	RES,5%,1/4W,100 K	5
R21B,21C,21D,21E,22	1000-1003	RES,5%,1/4W,100 K	5
R22A,22B,22C,22D,22E	1000-1003	RES,5%,1/4W,100 K	5
R23,23A,23B,23C,23D	1000-1002	RES,5%,1/4W,10 K	5
R3,3A,3B,3C,3D,3E,10	1001-7871	RES,1%,1/4W,7.87 K	7
R4,4A,4B,4C,4D,4E,5	1008-1001	RES,POT,1/4W,1 K,25T	7
R5A,5B,5C,5D,5E,11	1008-1001	RES,POT,1/4W,1 K,25T	6
R6,7	1001-2322	RES,1%,1/4W,23.2 K	2
R6A,7A	1001-1742	RES,1%,1/4W,17.4 K	2
6B,7B	1001-1432	RES,1%,1/4W,14.3K	2
6C,7C	1001-1212	RES,1%,1/4W,12.1 K	2
R6D,7D	1001-1052	RES,1%,1/4W,10.5 K	2
R6E,7E	1001-9311	RES,1%,1/4W,9.31 K	2

500SR MF FILTER PCB PARTS LIST (6741-3004)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
R8A,8B,8C,8D,8E	1001-1003	RES,1%,1/4W,100 K	5
R9A,9B,9C,9D,9E	1001-4421	RES,1%,1/4W,4.42 K	5
U1,1A,1B,1C,1D,1E	1110-4136	SEMI,IC,4136	6

500SR OPTION 3A PCB PARTS LIST (6741-3008)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0003	REV #3	1
-	2000-1547	ELEC,MISC,HEATSINK (100A)	2
-	2002-1001	HWD,6-32 X 5/8	1
-	2003-1001	HWD,4-40 X 3/8	4
-	2007-1001	HWD,4-40 X 1/4	4
-	2000-1546	ELEC,MISC,MICA INSULATOR	2
-	2011-1003	HWD,6-32 X 3/8	1
-	3400-3008	PCB,500SR,OPTION 3	1
C1	1050-0200	CAP,MICA,20 PF,5%	1
C101	1053-1001-A	CAP,ELEC,1000UF,25V,AXIAL	1
C102,103	1053-1000-A	CAP,ELEC,100UF,25V,AXIAL	2
C104,105,106,107,108	1052-0100	CAP,TANT,10UF,25V	5
C109	1052-0100	CAP,TANT,10UF,25V	1
C110,111	1054-0100	CAP,CER,.1UF,10V	2
C2	1052-0220	CAP,TANT,22UF,15V	1
C4	1054-0010	CAP,CER,.01UF,100V	1
C5	1050-1000	CAP,MICA,100 PF,5%	1
C6,3	1052-0010	CAP,TANT,1UF,35V	2
C7,8	1055-0010	CAP,MYL,.01UF,100V	2
C9	1059-1568	CAP,NPLPL,20UF,300V	1
CR1,2,3,4,42,43,44,45	1080-4446	SEMI,DIOD,1N4446	8
R11,12	1084-4684	SEMI,DIOD,LED INDICATOR	2
CR5,6,7,8,13,14,15,16	1081-4004	SEMI,DIOD,1N4004	8
CR9	1082-5265	SEMI,DIOD,1N5265B,ZENER,6	1
DS40	2000-7770	ELEC,MISC,500SR LAMP	1
Q1	1090-3565	SEMI,TRAN,2N3565	1
Q2	1092-1031	SEMI,TRAN,TIP 31C	1
Q3,41	1090-5401	SEMI,TRAN,2N5401	2
Q4,42	1090-3440	SEMI,TRAN,2N3440	2
R1,2,33	1000-4701	RES,5%,1/4W,4.7 K	3
R10	1001-1003	RES,1%,1/4W,100 K	1
R11	1001-5622	RES,1%,1/4W,56.2 K	1
R12	1001-5621	RES,1%,1/4W,5.62 K	1
R13,22,27,29	1001-2002	RES,1%,1/4W,20 K	4
R14	1001-8451	RES,1%,1/4W,8.45 K	1
R15	1001-2491	RES,1%,1/4W,2.49 K	1
R17,19	1001-5901	RES,1%,1/4W,5.9 K	2
R20	1003-5001	RES,POT,1/2W,5 K,1T	1
R23	1001-5620	RES,1%,1/4W,562 OHM	1
R24	1003-2000	RES,POT,1/2W,200 OHM,1T	1
R25	1001-7501	RES,1%,1/4W,7.5 K	1
R26	1003-1001	RES,POT,1/2W,1 K,1T	1
R3,41	1001-1000	RES,1%,1/4W,100 OHM	2
R30	1003-1002	RES,POT,1/2W,10 K,1T	1
R31	1001-3010	RES,1%,1/4W,301 OHM	1
R32	1001-5360	RES,1%,1/4W,536 OHM	1
R34,36	1000-1005	RES,5%,1/4W,10 MEG	2
R35,38	1000-1001	RES,5%,1/4W,1 K	2
R37	1000-0430	RES,5%,1/4W,43 OHM	1
R39	1000-3300	RES,5%,1/4W,330 OHM	1

500SR OPTION 3A PCB PARTS LIST (6741-3008)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
R4,5	1001-1001	RES,1%,1/4W,1 K	2
R40	1003-2002	RES,POT,1/2W,20 K,1T	1
R42	1000-2202	RES,5%,1/4W,22 K	1
R43,44	1000-4702	RES,5%,1/4W,47 K	2
R45,47	1013-3301	RES,5%,1W,3.3 K	2
R48,46	1000-2002	RES 5%,1/4W,20 K	2
R6,7,9,16,18,21,28	1001-1002	RES,1%,1/4W,10 K	7
R8	1001-1212	RES,1%,1/4W,12.1 K	1
RN1,2	1016-1002	RES,NETWORK 10 K,10-PIN	2
T1	3600-1000	XFMR,IN/OUT D14934	1
U1	1119-8085	SEMI,IC,P8085AH	1
U1,2	2000-1545	ELEC,MISC,40 PIN SOCKET	2
U10	1112-4081	SEMI,IC,CD4081AE	1
U11	1112-4069	SEMI,IC,CD4069	1
U12	1120-0820	SEMI,IC,FCD 820	1
U2	1119-8156	SEMI,IC,P8156H	1
U3	1119-8212	SEMI,IC,D8212	1
U3,4	2000-1543	ELEC,MISC,24 PIN SOCKET	2
U4	3991-0004	SEMI,PROG'ND PROM FOR 500	1
U5	1118-0800	SEMI,IC,DAC08EQ	1
U6	1110-0356	SEMI,IC,356	1
7,8	1110-1458	SEMI,IC,1458	2
U9	1113-7498	SEMI,IC,74LS32	1
VR101	1102-7805	SEMI,IC,7805 HIGH,VOLT RE	1
VR102	1100-7812	SEMI,IC,78M12,VOLT REG	1
VR103	1101-7912	SEMI,IC,79M12,VOLT REG	1
Y1	1141-1007	ELEC,MISC,6.144 MHZ CRYST	1

500SR TT FILTER PARTS LIST (6742-3004)

REFERENCE DES.	ODI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	3400-3004	PCB,500SR FILTER MF-SF-TT	1
C1,1A,1B,1C,1D,1E,1F	1054-0010	CAP,CER,.01UF,100V	7
C2,2A,2B,2C,2D,2E,2F	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C3,3A,3B,3C,3D,3E,3F	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C4,4A,4B,4C,4D,4E,4F	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C5,5A,5B,5C,5D,5E,5F	1058-0100	CAP,PYCA,.01UF,2%,50V	7
C6,6A,6B,6C,6D,6E,6F	1052-0010	CAP,TANT,1UF,35V	7
C7,7A,7B,7C,7D,7E,7F	1052-0001	CAP,TANT,.1UF,35V	7
C8,8A,8B,8C,8D,8E,8F	1052-0001	CAP,TANT,.1UF,35V	7
C9,10	1052-0100	CAP,TANT,10UF,25V	2
CR1,1A,1B,1C,1D,1E,1F	1080-4446	SEMI,DIOD,1N4446	7
CR2,2A,2B,2C,2D,2E,2F	1080-4446	SEMI,DIOD,1N4446	7
CR3,3A,3B,3C,3D,3E,3F	1080-4446	SEMI,DIOD,1N4446	7
Q1,1A,1B,1C,1D,1E,1F	1090-3565	SEMI,TRAN,2N3565	7
Q2,2A,2B,2C,2D,2E,2F	1090-3565	SEMI,TRAN,2N3565	7
R1,1A,1B,1C,1D,1E,1F	1001-1003	RES,1%,1/4W,100 K	7
R10,10A,10B,10C,10D	1001-7871	RES,1%,1/4W,7.87 K	5
R10E,10F	1001-7871	RES,1%,1/4W,7.87 K	2
R11,11A,11B,11C,11D	1008-1001	RES,POT,1/4W,1 K,25T	5
R11E,11F,12,12A,12B	1008-1001	RES,POT,1/4W,1 K,25T	5
12C,12D,12E,12F	1008-1001	RES,POT,1/4W,1 K,25T	4
R13,14	1001-2152	RES,1%,1/4W,21.5 K	2
R13A,14A	1001-2002	RES,1%,1/4W,20 K	2
R13B,14B	1001-1782	RES,1%,1/4W,17.8 K	2
R13C,14C	1001-1622	RES,1%,1/4W,16.2 K	2
R13D,14D	1001-1242	RES,1%,1/4W,12.4 K	2
R13E,14E,6E,7E	1001-1152	RES,1%,1/4W,11.5 K	4
R13F,14F	1001-1002	RES,1%,1/4W,10 K	2
R15,15A,15B,15C,15D	1004-2002	RES,POT,3/4W,20 K,15T	5
R15E,15F	1004-2002	RES,POT,3/4W,20 K,15T	2
R16,16A,16B,16C,16D	1000-1000	RES,5%,1/4W,100 OHM	5
R16E,16F	1000-1000	RES,5%,1/4W,100 OHM	2
R17,17A,17B,17C,17D	1000-1004	RES,5%,1/4W,1 M	5
R17E,17F	1000-1004	RES,5%,1/4W,1 M	2
R18,18A,18B,18C,18D	1000-1003	RES,5%,1/4W,100 K	5
R18E,18F,19,19A,19B	1000-1003	RES,5%,1/4W,100 K	5
R19C,19D,19E,19F,20	1000-1003	RES,5%,1/4W,100 K	5
R2,2A,2B,2C,2D,2E,2F	1001-4421	RES,1%,1/4W,4.42 K	7
R20F,21,21A,21B,21C	1000-1003	RES,5%,1/4W,100 K	5
R21D,21E,21F,22,22A	1000-1003	RES,5%,1/4W,100 K	5
R22B,22C,22D,22E,22F	1000-1003	RES,5%,1/4W,100 K	5
R23,23A,23B,23C,23D	1000-1002	RES,5%,1/4W,10 K	5
R23E,23F	1000-1002	RES,5%,1/4W,10 K	2
R3,3A,3B,3C,3D,3E,3F	1001-7871	RES,1%,1/4W,7.87 K	7
R4,4A,4B,4C,4D,4E,4F	1008-1001	RES,POT,1/4W,1 K,25T	7
R5,5A,5B,5C,5D,5E,5F	1008-1001	RES,POT,1/4W,1 K,25T	7
,7	1001-2322	RES,1%,1/4W,23.2 K	2
R6A,7A	1001-2102	RES,1%,1/4W,21 K	2
R6B,7B	1001-1872	RES,1%,1/4W,18.7 K	2

500SR TT FILTER PARTS LIST (6742-3004)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
R6C,7C	1001-1692	RES,1%,1/4W,16.9 K	2
R6D,7D	1001-1302	RES,1%,1/4W,13 K	2
R6F,7F	1001-1052	RES,1%,1/4W,10.5 K	2
R8,8A,8B,8C,8D,8E,8F	1001-1003	RES,1%,1/4W,100 K	7
R9,9A,9B,9C,9D,9E,9F	1001-4421	RES,1%,1/4W,4.42 K	7
RR20A,20B,20C,20D,20E	1000-1003	RES,5%,1/4W,100 K	5
U1,1A,1B,1C,1D,1E,1F	1110-4136	SEMI,IC,4136	7

MODEL 500SR WITH OPT. 1 PARTS LIST (7500-1918)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	3000-1012	SM,FP,500SR DUSTCOVER	1
-	3004-1045	SM,MISC,500SR CARD RETAIN	1
-	3004-1012	SM,MISC,500SR PLATE	1
-	3004-1015	SM,MISC,500SR CARD CAGE B	1
-	2000-1540	ELEC,MISC,HOT STAMP BUTTO	11
-	2002-1004	HWD,6-32 X 5/16	2
-	2002-1005	HWD,6-32 X 5/16	4
-	6500-1918	ASY,FINAL,500SR W/OPTION	1

500SR OPTION 2 PARTS LIST (7850-0200)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	6740-3005	ASY,PCB,500SR E&M LOOP	1

500SR OPTION 3 PARTS LIST (7850-0300)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	6740-3008	ASY,PCB,500SR OPTION 3	1
-	6700-1020	ASY,FP,500SR OPTION 3	1

500SR OPTION 3A PARTS LIST (7850-0301)

REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	6741-3008	ASY,PCB,500SR OPTION 3A	1
-	6700-1021	ASY,FP,500SR OPTION 3A	1

500SR OPTION 4 PARTS LIST (7850-0400)

	REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
0		6740-3005	ASY,PCB,500SR E&M LOOP	1
0		6740-3004	ASY,PCB,500SR SF FILTER	1

500SR OPTION 5 PARTS LIST (7850-0500)

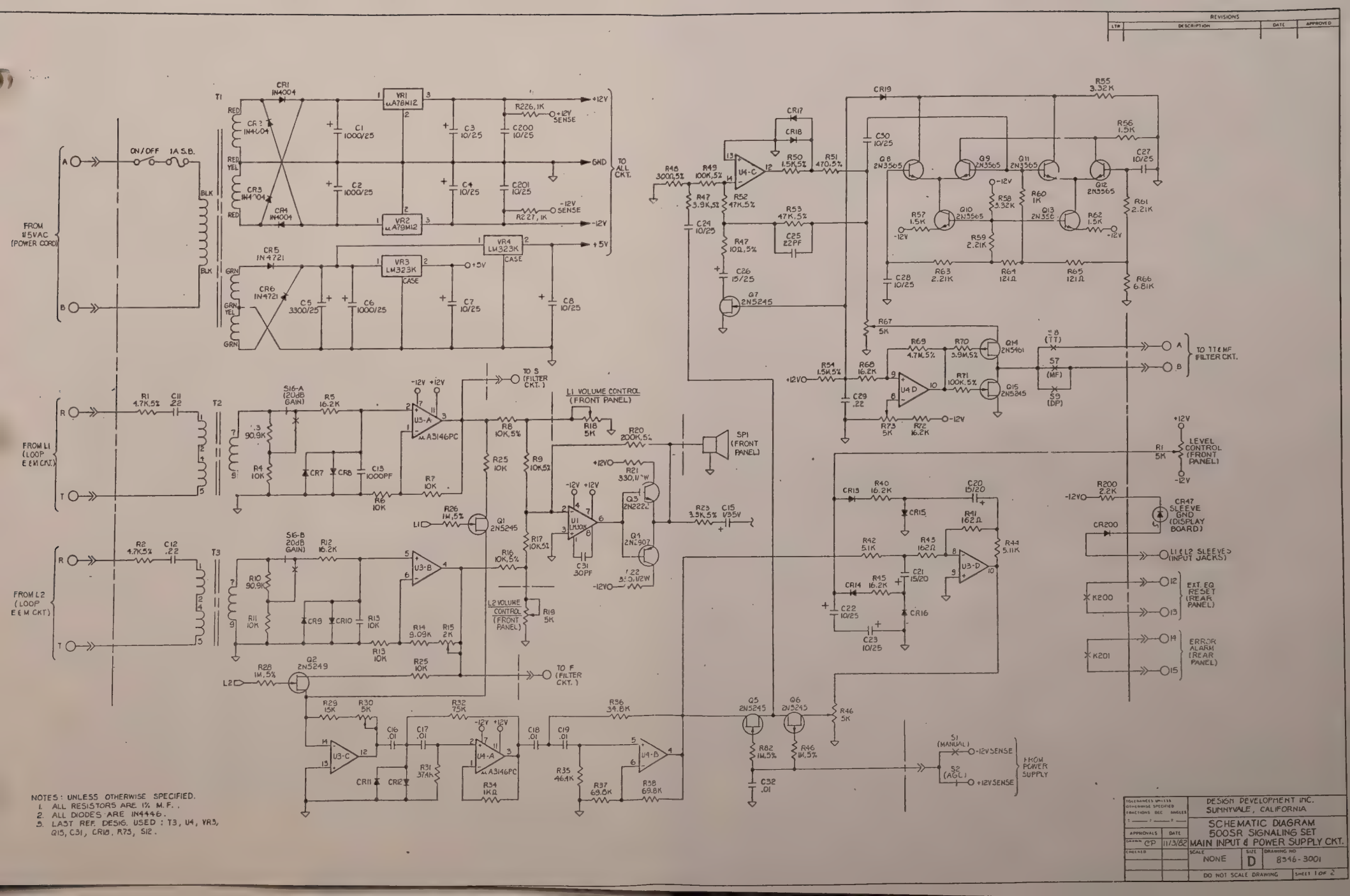
REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
0	6740-3002	ASY,PCB,500SR TT DECODER	1
0	6742-3004	ASY,PCB,500SR TT FILTER	1

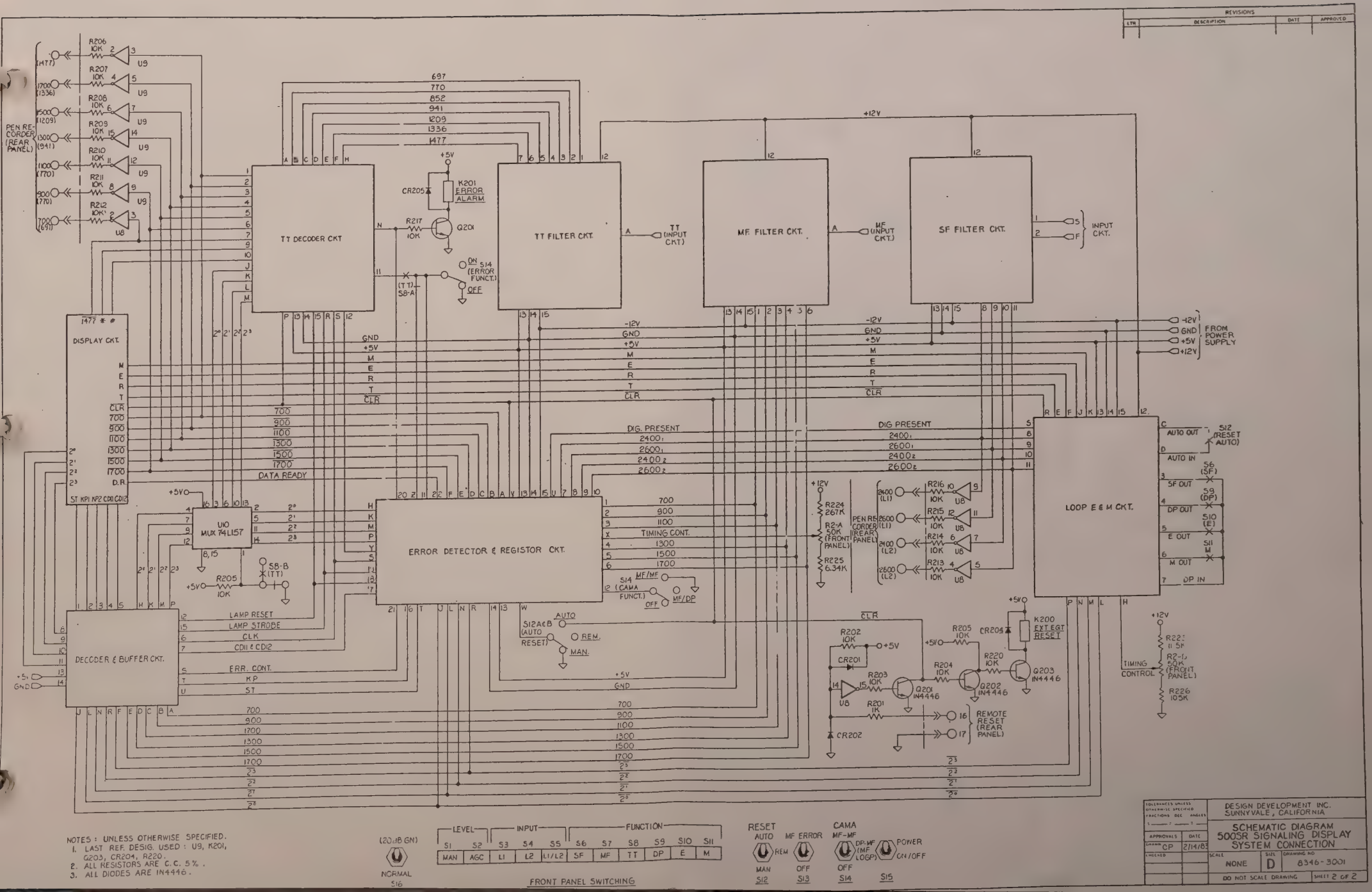
500SR 23" RACK MOUNT PARTS LIST

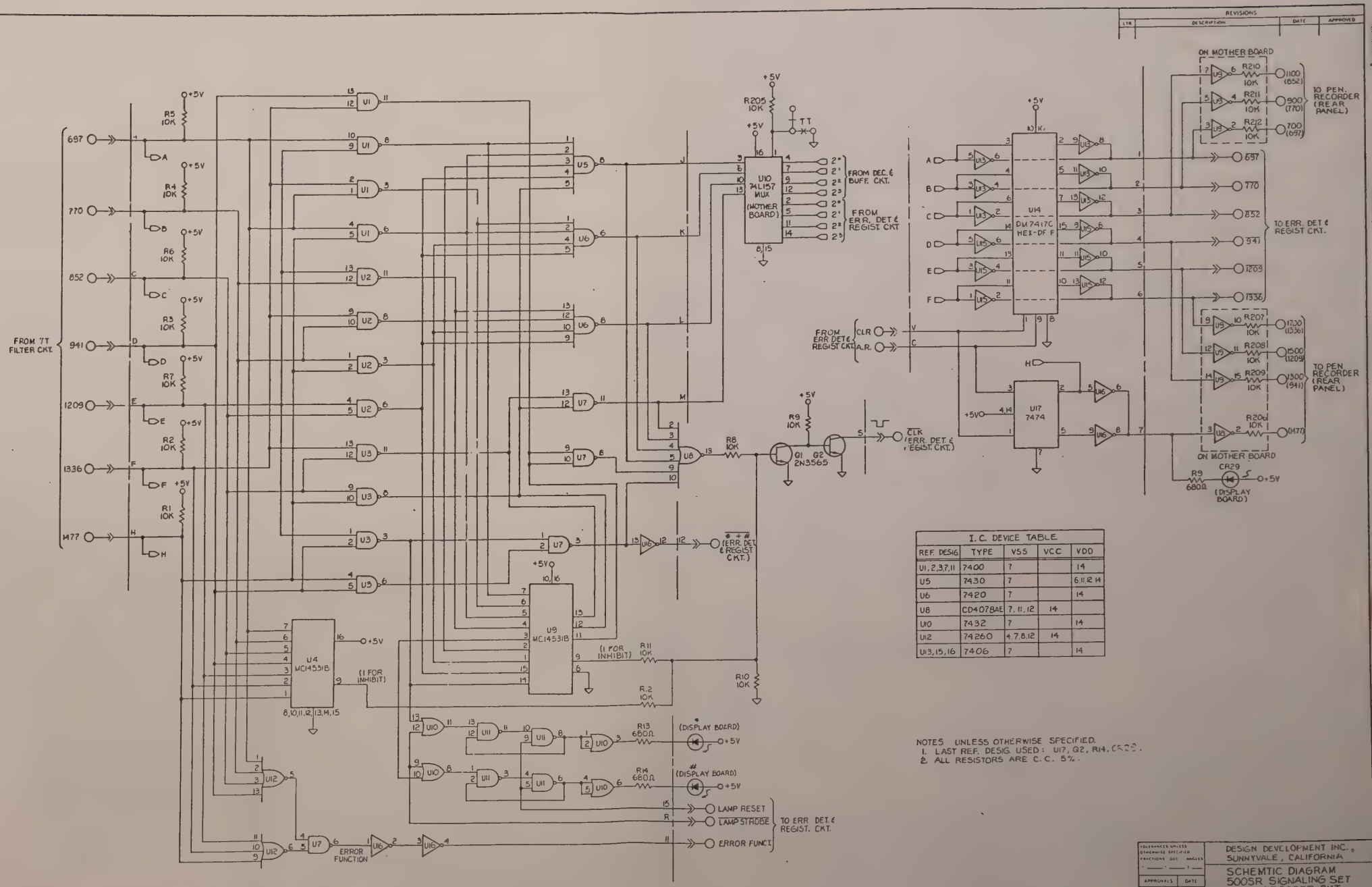
REFERENCE DES.	DDI PART #	DESCRIPTION	QUANTITY
-	3004-1021	SM,MISC,23	2
-	3004-1033	SM,MISC,500SR 23	2

500SR FINAL ASSEMBLY WITH OPT. 1 (6500-1918)

REFERENCE DES.	ODI PART #	DESCRIPTION	QUANTITY
-	0002	REV #2	1
-	2000-1521	ELEC,MISC,5.5	3
-	2000-1523	ELEC,MISC,SHRINK SLEEVE M	1
-	2000-1537	ELEC,MISC,CABLE TIE MOUNT	1
-	2000-1710	WIRE,SPOOL,GREEN	1
-	2000-1711	WIRE,SPOOL,RED	1
-	2000-1724	WIRE,SPOOL,OR	1
-	2000-1725	WIRE,18 AWG,BLACK	1
-	2002-1004	HWD,6-32 X 5/16	4
-	2002-1005	HWD,6-32 X 5/16	4
-	2006-1000	HWD,6-32 X 5/16	1
-	6700-1011	ASY,FP,500SR	1
-	6710-1006	ASY,RP,500SR	1
-	6720-1006	ASY,CHASSIS,500SR	1
-	6740-3006	ASY,PCB,500SR ERROR DETEC	1
-	6740-3007	ASY,PCB,500SR MF DECODER	1
-	6741-3004	ASY,PCB,500SR MF FILTER	1


REVISIONS
LTR DESCRIPTION DATE APPROVED
FROM 115VAC (POWER CORD)
ON/OFF 1A S.B.
T1
CR1 IN4004
CR2 IN4004
CR3 IN4004
CR4 IN4004
VR1 uA78M12
VR2 uA79M12
C1 1000/25
C2 1000/25
C3 10/25
C4 10/25
C200 10/25
C201 10/25
R226, 1K +12V SENSE
R227, 1K -12V SENSE
+12V
GND
-12V
TO ALL CKT.
CR5 IN4721
CR6 IN4721
VR3 LM323K CASE
VR4 LM323K CASE
+5V
C5 3300/25
C6 1000/25
C7 10/25
C8 10/25
FROM L1 (LOOP E&M CKT.)
T2
R1 4.7K,5% C11 .22
S16-A (20dB GAIN)
R5 16.2K
U3-A uA3146PC
R4 10K
CR7 CR8
C13 1000PF
R6 10K
R7 10K
R8 10K,5%
R25 10K
R9 10K,5%
TO S (FILTER CKT.)
L1 VOLUME CONTROL (FRONT PANEL)
R18 5K
R20 200K,5%
SP1 (FRONT PANEL)
R21 330,1/4W
Q3 2N2222
Q4 2N2907
U1 LM301A
C31 30PF
R23 3.3K,5% C15 1/35V
R26 1M,5%
Q1 2N5245
L1
R17 10K,5%
R16 10K,5%
FROM L2 (LOOP E&M CKT)
T3
R2 4.7K,5% C12 .22
S16-B (20dB GAIN)
R12 16.2K
U3-B
R10 90.9K
R11 10K
CR9 CR10
R13 10K
R14 9.09K
R15 2K
L2 VOLUME CONTROL (FRONT PANEL)
R19 5K
R28 1M,5%
Q2 2N5249
L2
R25 10K
TO F (FILTER CKT.)
R29 15K
R30 5K
R32 75K
U3-C
C16 .01
C17 .01
U4-A uA3146PC
R31 374K
R34 1K Ω
CR11 CR12
C18 .01
C19 .01
R35 464K
R36 34.8K
U4-B
R37 69.8K
R38 69.8K
CR19
R55 3.32K
CR17
CR18
C30 10/25
R56 1.5K
U4-C
R48 3000,5%
R49 100K,5%
R50 1.5K,5%
R51 470,5%
Q8 2N3565
Q9 2N3565
Q11 2N3565
Q12 2N3565
C27 10/25
R47 3.9K,5%
R52 47K,5%
R53 47K,5%
C25 22PF
C24 10/25
R57 1.5K
Q10 2N3565
R58 3.32K
R60 1K
Q13 2N3565
R62 1.5K
R61 2.21K
R59 2.21K
R63 2.21K
R64 121Ω
R65 121Ω
R66 6.81K
C28 10/25
R47 101,5%
C26 15/25
Q7 2N5245
R67 5K
R69 4.7M,5%
R70 3.9M,5%
Q14 2N5401
Q15 2N5245
R71 100K,5%
R54 1.5M,5%
R68 16.2K
U4-D
C29 .22
R73 5K
R72 16.2K
S7 (MF)
S9 (DP)
TO T&MF FILTER CKT.
R1 5K
LEVEL CONTROL (FRONT PANEL)
R200 2.2K
CR47 SLEEVE GND (DISPLAY BOARD)
CR200
L1 & L2 SLEEVES (INPUT JACKS)
CR13 R40 16.2K C20 15/20
CR15
R41 162Ω
R42 5.1K
R43 162Ω
R44 5.11K
U3-D
C21 15/20
CR14 R45 16.2K
CR16
C22 10/25
C23 10/25
K200
EXT. EQ RESET (REAR PANEL)
K201
ERROR ALARM (REAR PANEL)
Q5 2N5245
Q6 2N5249
R46 5K
R82 1M,5%
R46 1M,5%
C32 .01
S1 (MANUAL) -12V SENSE
S2 (AGC) +12V SENSE
TO MOM POWER SUPPLY
NOTES: UNLESS OTHERWISE SPECIFIED.
1. ALL RESISTORS ARE 1% M.F..
2. ALL DIODES ARE IN4446.
3. LAST REF. DESIG. USED: T3, U4, VR3, Q15, C31, CR13, R73, S12.
DESIGN DEVELOPMENT INC. SUNNYVALE, CALIFORNIA
SCHEMATIC DIAGRAM 500SR SIGNALING SET MAIN INPUT & POWER SUPPLY CKT.
APPROVALS DATE
DRAWN CP 11/3/82
CHECKED
SCALE NONE
SIZE D
DRAWING NO 8346-3001
DO NOT SCALE DRAWING
SHEET 1 OF 2


REVISIONS
LTR | DESCRIPTION | DATE | APPROVED
PEN RECORDER (REAR PANEL)
R206 10K
R207 10K
R208 10K
R209 10K
R210 10K
R211 10K
R212 10K
U9
U8
1700 (1336)
1500 (1209)
1300 (941)
1100 (770)
900 (770)
700 (691)
1477
697
770
852
941
1209
1336
1477
TT DECODER CKT
TT FILTER CKT.
MF FILTER CKT.
SF FILTER CKT.
INPUT CKT.
TT (INPUT CKT)
MF (INPUT CKT.)
+5V
CR205
K201 ERROR ALARM
R217 10K
Q201
ON S14 (ERROR FUNCT.)
OFF
(T.T.) S8-A
+12V
-12V
GND
+5V
FROM POWER SUPPLY
1477 # #
DISPLAY CKT.
M E R T CLR
700
900
1100
1300
1500
1700
D.R.
DATA READY
ST KP1 KP2 CDI1 CDI2
U10 MUX 74L157
8,15
R205 10K
S8-B (TT)
ERROR DETECTOR & REGISTOR CKT.
DIG. PRESENT
2400₁
2600₁
2400₂
2600₂
TIMING CONT.
S14 (CAMA FUNCT.) MF/MF MF/DP OFF
R224 267K
R2-A 50K (FRONT PANEL)
R225 6.34K
PEN RECORDER (REAR PANEL)
R216 10K
R215 10K
R214 10K
R213 10K
LOOP E & M CKT.
AUTO OUT
AUTO IN
SF OUT
DP OUT
E OUT
M OUT
DP IN
S12 (RESET AUTO)
56 (SF)
59 (DP)
510 (E)
511 M
DECODER & BUFFER CKT.
LAMP RESET
LAMP STROBE
CLK
CDI1 & CDI2
ERR. CONT.
KP
ST
S12A&B (AUTO RESET) AUTO REM. MAN.
R202 10K
R205 10K
CR204
K200 EXT EGT RESET
CR201
R203 10K
R204 10K
R220 10K
Q201 IN4446
Q202 IN4446
Q203 IN4446
R201 1K
CR202
REMOTE RESET (REAR PANEL)
TIMING CONTROL
R223 11.5K
R2-B 50K (FRONT PANEL)
R226 105K
NOTES: UNLESS OTHERWISE SPECIFIED.
1. LAST REF. DESIG. USED: U9, K201, Q203, CR204, R220.
2. ALL RESISTORS ARE C.C. 5%.
3. ALL DIODES ARE IN4446.
(20dB GN) NORMAL S16
LEVEL: S1 MAN | S2 AGC
INPUT: S3 L1 | S4 L2 | S5 L1/L2
FUNCTION: S6 SF | S7 MF | S8 TT | S9 DP | S10 E | S11 M
FRONT PANEL SWITCHING
RESET: AUTO / REM — MAN S12
MF ERROR: OFF S13
CAMA: MF-MF / DP-MF (MF LOGP) — OFF S14
POWER: ON / OFF S15
TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES
APPROVALS DATE
DRAWN CP 2/14/83
CHECKED
DESIGN DEVELOPMENT INC. SUNNYVALE, CALIFORNIA
SCHEMATIC DIAGRAM 5005R SIGNALING DISPLAY SYSTEM CONNECTION
SCALE NONE SIZE D DRAWING NO 8346-3001
DO NOT SCALE DRAWING SHEET 2 OF 2



I.C. DEVICE TABLE				
REF. DESIG.	TYPE	VSS	VCC	VDD
U1, 2, 3, 7, 11	7400	7		14
U5	7430	7		8, 11, 12 14
U6	7420	7		14
U8	CD4078AE	7, 11, 12	14	
U10	7432	7		14
U12	74260	4, 7, 8, 12	14	
U13, 15, 16	7406	7		14

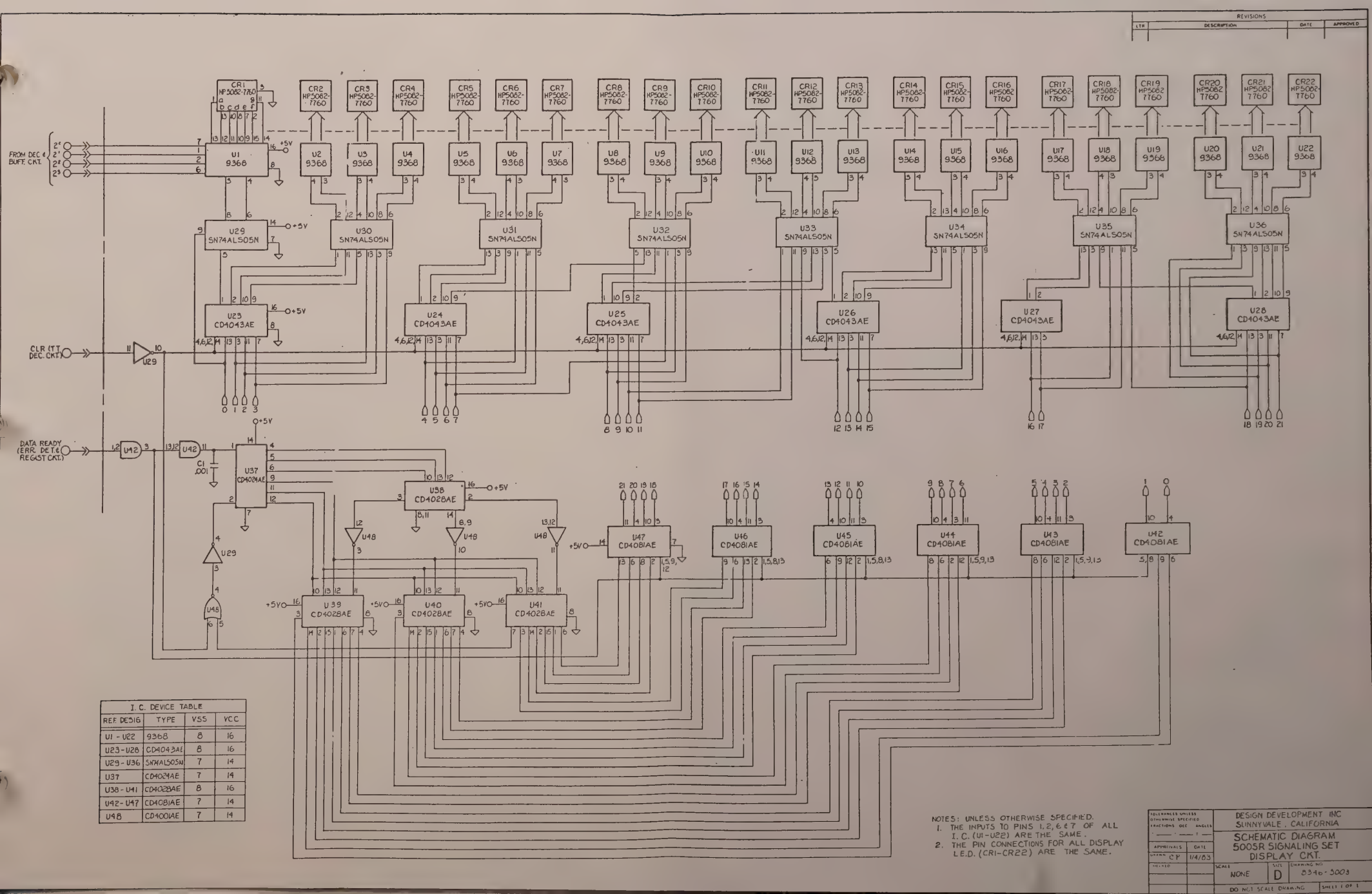
NOTES UNLESS OTHERWISE SPECIFIED.
1. LAST REF. DESIG USED: U17, Q2, R14, CR29.
2. ALL RESISTORS ARE C.C. 5%.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS DEC ANGLES
APPROVALS DATE
DRAWN CP 12/3/82
CHECKED

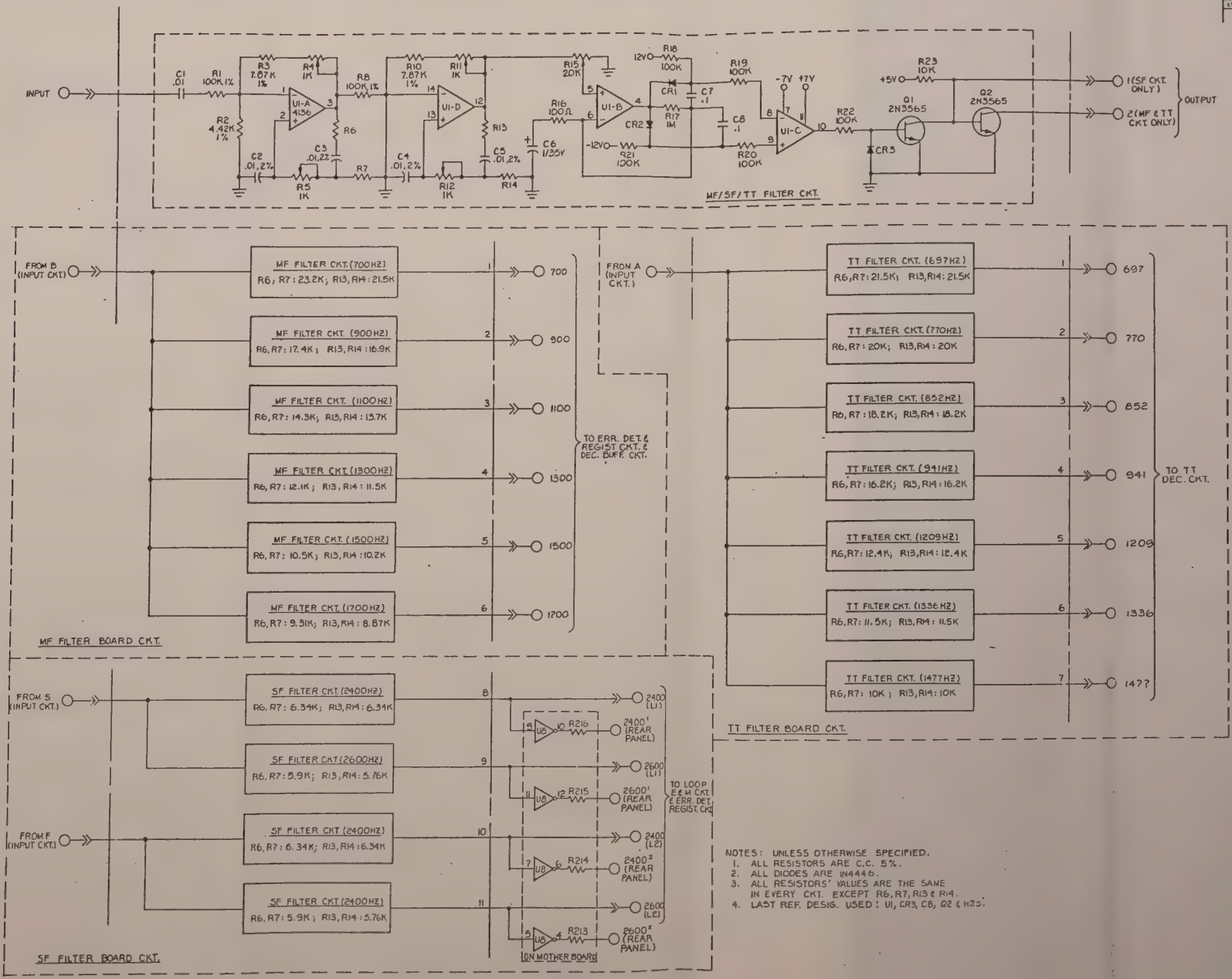
DESIGN DEVELOPMENT INC.
SUNNYVALE, CALIFORNIA

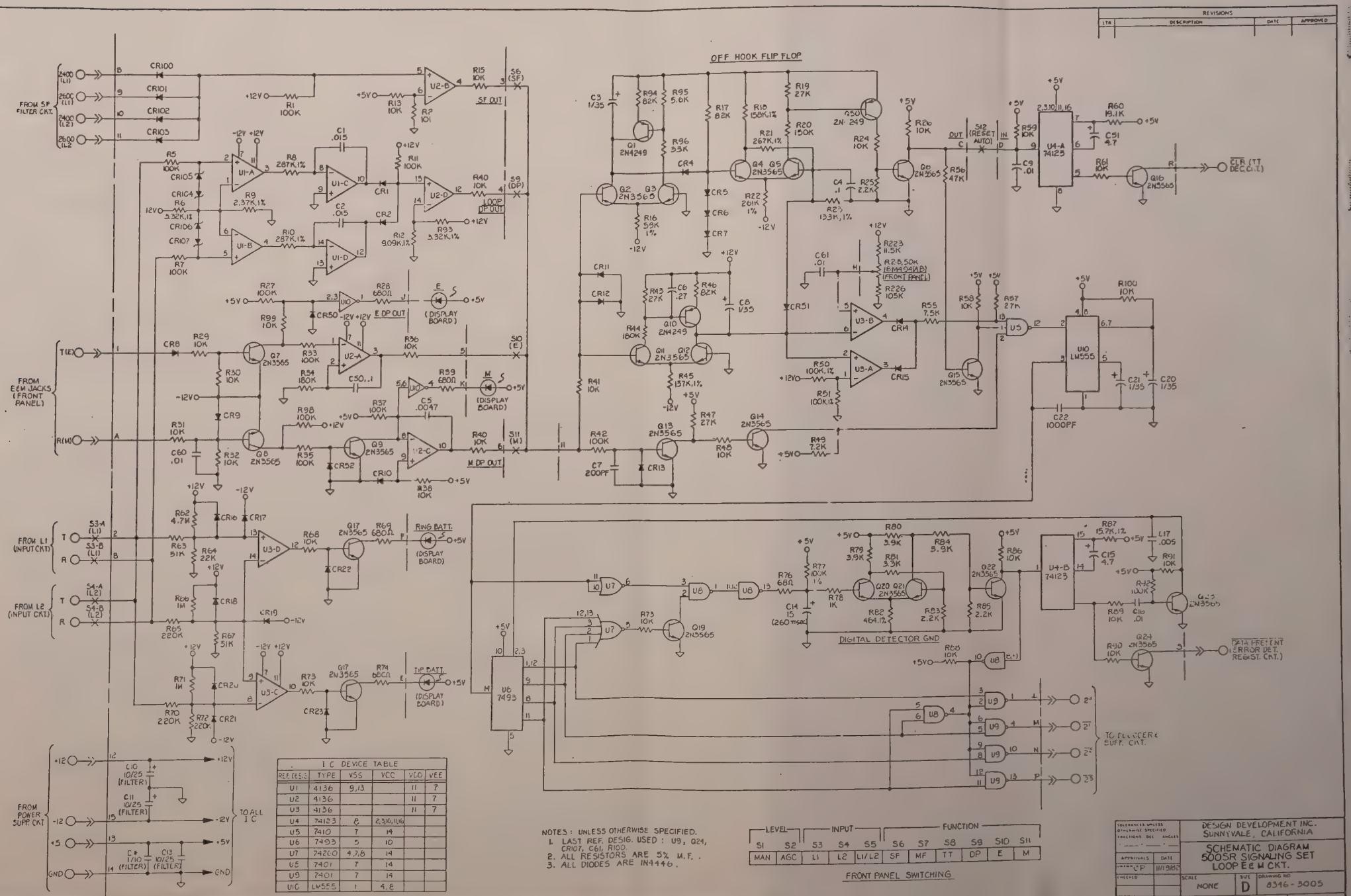
SCHEMTIC DIAGRAM
500SR SIGNALING SET
T.T. DECODER CKT.

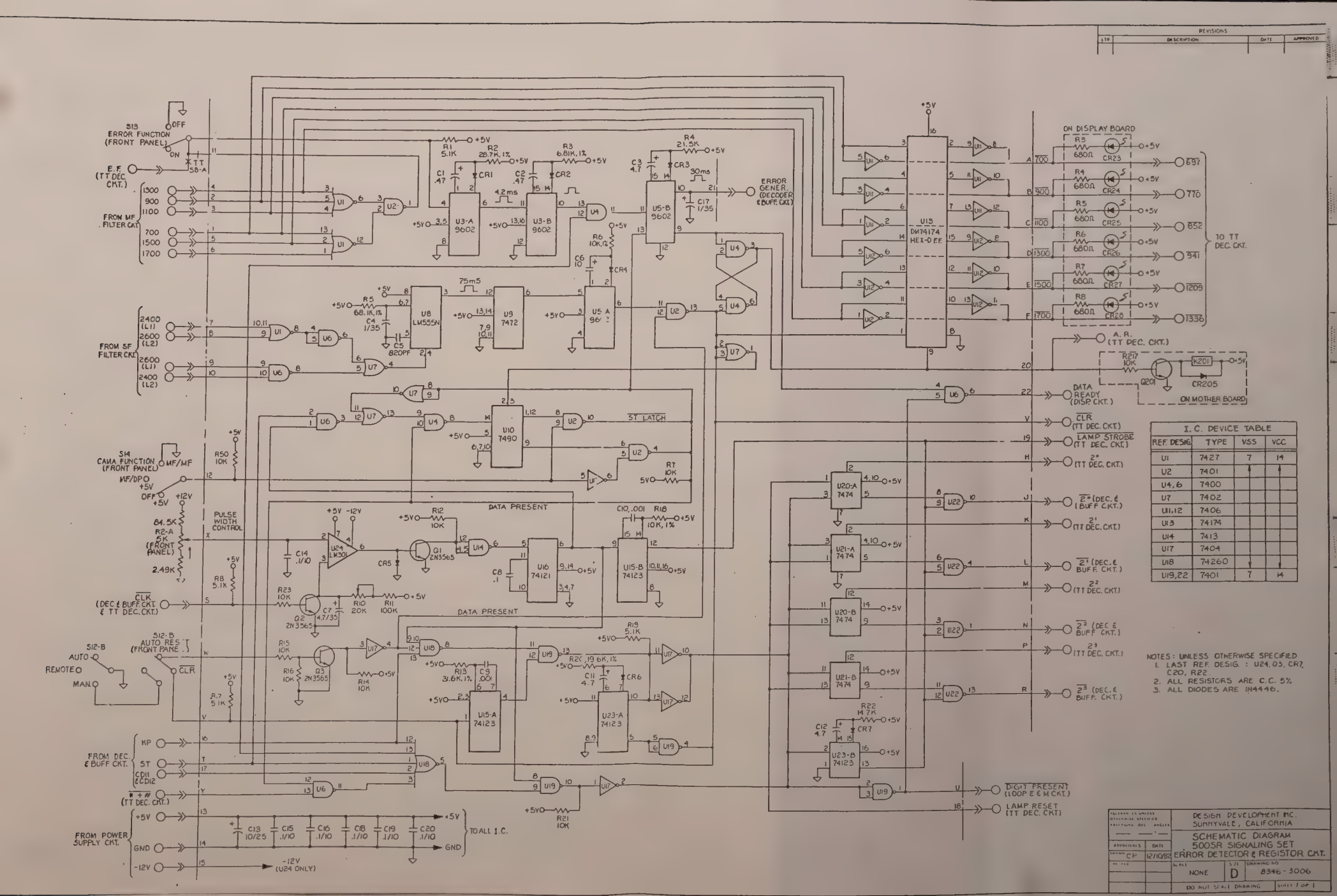
SCALE NONE SIZE D DRAWING NO 5346-3002
DO NOT SCALE DRAWING SHEET 1 OF 1

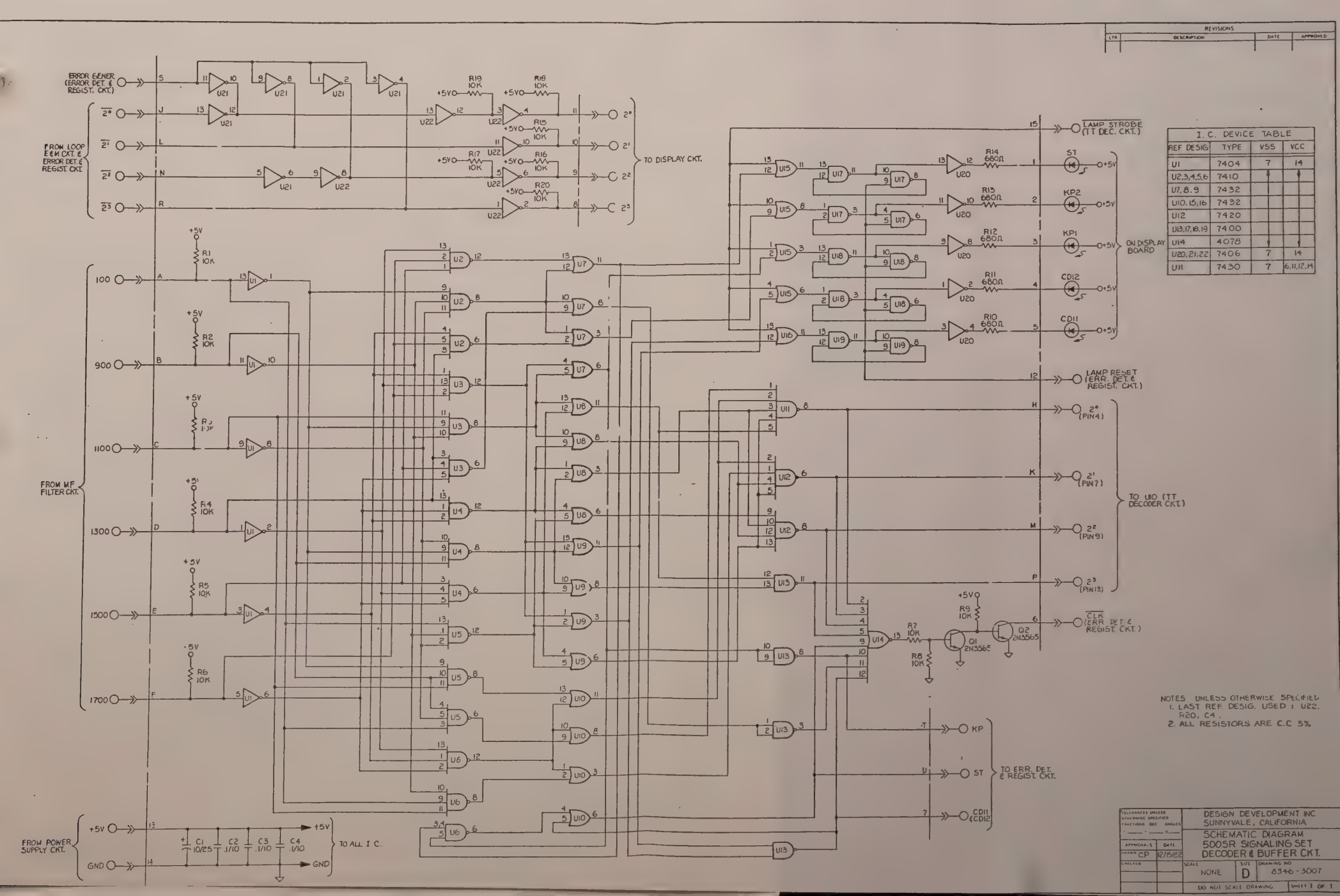


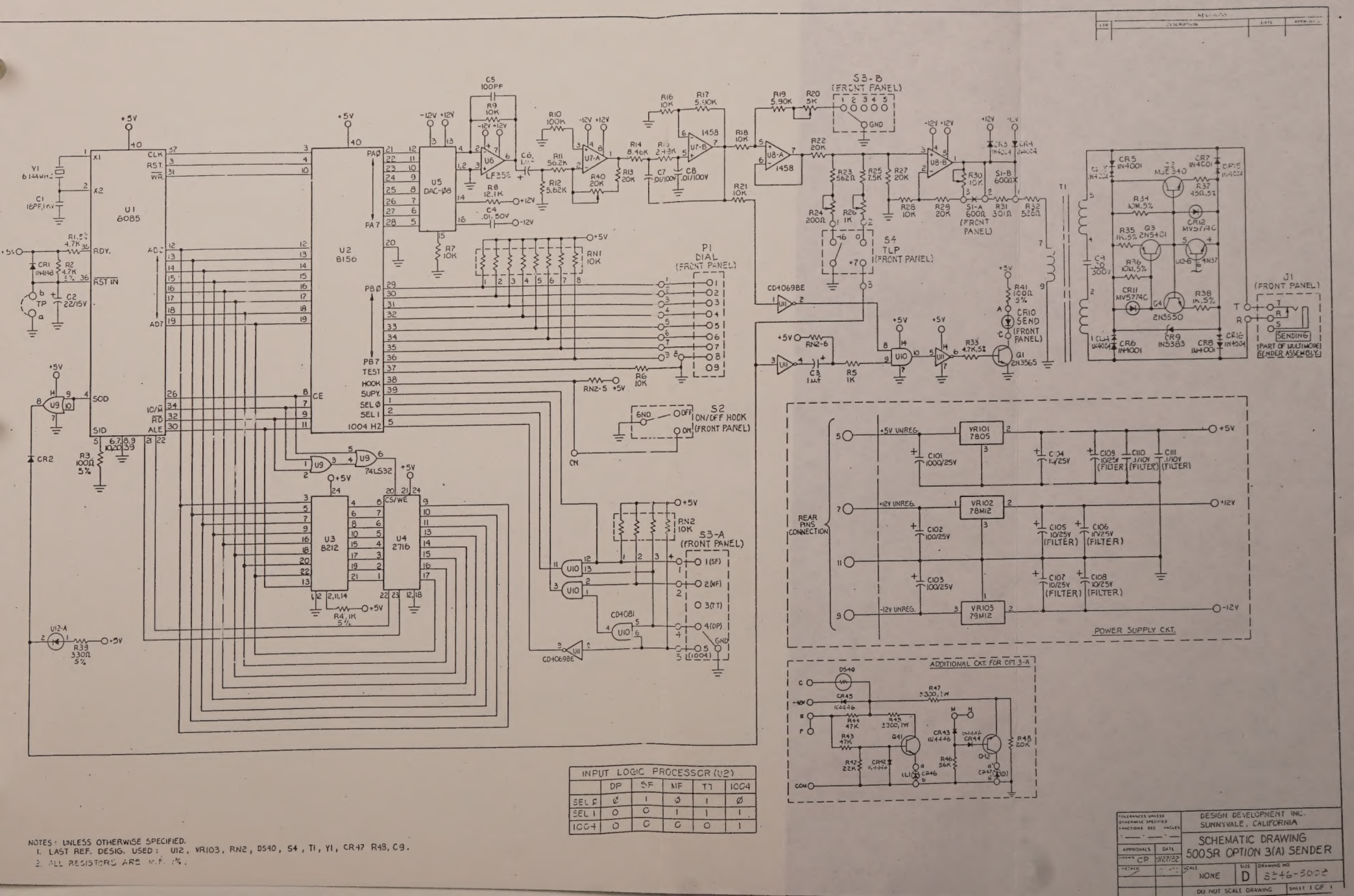
I. C. DEVICE TABLE			
REF. DESIG	TYPE	VSS	VCC
U1 - U22	9368	8	16
U23 - U28	CD4043AE	8	16
U29 - U36	SN74ALS05N	7	14
U37	CD4029AE	7	19
U38 - U41	CD4028AE	8	16
U42 - U47	CD4081AE	7	14
U48	CD4001AE	7	14


REVISIONS
LTR | DESCRIPTION | DATE | APPROVED
INPUT
C1 .01
R1 100K 1%
R3 7.87K 1%
R4 1K
U1-A 4136
R2 4.42K 1%
R6
C2 .01, 2%
C3 .01, 2%
R5 1K
R7
R8 100K 1%
R10 7.87K 1%
R11 1K
U1-D
R13
C4 .01, 2%
R12 1K
C5 .01, 2%
R14
R15 20K
R16 100Ω
C6 1/35V
U1-B
CR2
R18 100K
CR1
C7 .1
R17 1M
R19 100K
C8 .1
R20 100K
R21 100K
-12VO
12VO
-7V
+7V
U1-C
R22 100K
+5VO
R23 10K
Q1 2N3565
Q2 2N3565
CR3
1 (SF CKT. ONLY)
2 (MF & TT CKT. ONLY)
OUTPUT
MF/SF/TT FILTER CKT.
FROM B (INPUT CKT.)
MF FILTER CKT. (700HZ)
R6, R7: 23.2K; R13, R14: 21.5K
700
MF FILTER CKT. (900HZ)
R6, R7: 17.4K; R13, R14: 16.9K
900
MF FILTER CKT. (1100HZ)
R6, R7: 14.3K; R13, R14: 13.7K
1100
MF FILTER CKT. (1300HZ)
R6, R7: 12.1K; R13, R14: 11.5K
1300
MF FILTER CKT. (1500HZ)
R6, R7: 10.5K; R13, R14: 10.2K
1500
MF FILTER CKT. (1700HZ)
R6, R7: 9.31K; R13, R14: 8.87K
1700
TO ERR. DET. & REGIST CKT. & DEC. BUFF. CKT.
MF FILTER BOARD CKT.
FROM A (INPUT CKT.)
TT FILTER CKT. (697HZ)
R6, R7: 21.5K; R13, R14: 21.5K
697
TT FILTER CKT. (770HZ)
R6, R7: 20K; R13, R14: 20K
770
TT FILTER CKT. (852HZ)
R6, R7: 18.2K; R13, R14: 18.2K
852
TT FILTER CKT. (941HZ)
R6, R7: 16.2K; R13, R14: 16.2K
941
TT FILTER CKT. (1209HZ)
R6, R7: 12.4K; R13, R14: 12.4K
1209
TT FILTER CKT. (1336HZ)
R6, R7: 11.5K; R13, R14: 11.5K
1336
TT FILTER CKT. (1477HZ)
R6, R7: 10K; R13, R14: 10K
1477
TO TT DEC. CKT.
TT FILTER BOARD CKT.
FROM S (INPUT CKT.)
SF FILTER CKT. (2400HZ)
R6, R7: 6.34K; R13, R14: 6.34K
2400 (L1)
2400' (REAR PANEL)
SF FILTER CKT (2600HZ)
R6, R7: 5.9K; R13, R14: 5.76K
2600 (L1)
2600' (REAR PANEL)
FROM F (INPUT CKT.)
SF FILTER CKT (2400HZ)
R6, R7: 6.34K; R13, R14: 6.34K
2400 (L2)
2400' (REAR PANEL)
SF FILTER CKT (2600HZ)
R6, R7: 5.9K; R13, R14: 5.76K
2600 (L2)
2600' (REAR PANEL)
U6
R216
R215
R214
R213
TO LOOP E & M CKT. & ERR. DET. REGIST. CKT.
ON MOTHER BOARD
SF FILTER BOARD CKT.
NOTES: UNLESS OTHERWISE SPECIFIED.
1. ALL RESISTORS ARE C.C. 5%.
2. ALL DIODES ARE IN4446.
3. ALL RESISTORS' VALUES ARE THE SAME IN EVERY CKT. EXCEPT R6, R7, R13 & R14.
4. LAST REF. DESIG. USED: U1, CR3, C8, Q2 & R23.
DESIGN DEVELOPMENT INC.
SUNNYVALE, CALIFORNIA
SCHEMATIC DIAGRAM
500SR SIGNALING SET
MF/SF/TT FILTER CKT.
DRAWN CP 11/24/82
SCALE NONE
SIZE D
DRAWING NO 8346-3004
DO NOT SCALE DRAWING
SHEET 1 OF 1


REVISIONS
LTR
DESCRIPTION
DATE
APPROVED
OFF HOOK FLIP FLOP
FROM SF FILTER CKT.
FROM E&M JACKS (FRONT PANEL)
FROM L1 (INPUT CKT)
FROM L2 (INPUT CKT)
FROM POWER SUPP. CKT
TO ALL I.C
SF OUT
LOOP DP OUT
E DP OUT
M DP OUT
RING BATT.
TIP BATT.
(DISPLAY BOARD)
DIGITAL DETECTOR GND
TO FLOOGERE BUFF. CKT.
DATA PRESENT ERROR DET. REGIST. CKT.)
CLR (TT DECODER)
I C DEVICE TABLE
REF. DESIG.
TYPE
VSS
VCC
VDD
VEE
U1 4136 9,13 11 7
U2 4136 11 7
U3 4136 11 7
U4 74123 8 2,3,10,11,16
U5 7410 7 14
U6 7493 5 10
U7 7420 4,7,8 14
U8 7401 7 14
U9 7401 7 14
U10 LM555 1 4,8
NOTES: UNLESS OTHERWISE SPECIFIED.
1. LAST REF. DESIG. USED: U9, Q24, CR107, C61, R100
2. ALL RESISTORS ARE 5% M.F.
3. ALL DIODES ARE IN4446.
LEVEL
INPUT
FUNCTION
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11
MAN AGC LI L2 LI/L2 SF MF TT DP E M
FRONT PANEL SWITCHING
DESIGN DEVELOPMENT INC.
SUNNYVALE, CALIFORNIA
SCHEMATIC DIAGRAM
500SR SIGNALING SET
LOOP E & M CKT.
APPROVALS
DATE
DRAWN CP 11/19/69
CHECKED
SCALE NONE
SIZE D
DRAWING NO 8396-3005
DO NOT SCALE DRAWING
SHEET 1 OF 1


REVISIONS
LTR | DESCRIPTION | DATE | APPROVED
S13 ERROR FUNCTION (FRONT PANEL)
OFF
ON
E.F. (TT DEC CKT.)
FROM MF FILTER CKT
1300
900
1100
700
1500
1700
R1 5.1K
R2 28.7K, 1%
R3 6.81K, 1%
R4 21.5K
C1 .47
C2 .47
C3 4.7
CR1
CR2
CR3
4.2ms
30ms
U3-A 9602
U3-B 9602
U5-B 9602
ERROR GENER. (DECODER & BUFF. CKT.)
C17 1/35
R6 10K, 1%
C6 10
CR4
75m5
R5 68.1K, 1%
C4 1/35
C5 820PF
U8 LM555N
U9 7472
U5 A 9602
FROM SF FILTER CKT
2400 (L1)
2600 (L2)
2600 (L1)
2400 (L2)
U13 DM74174 HEX D FF.
ON DISPLAY BOARD
R5 680Ω
R6 680Ω
R7 680Ω
R8 680Ω
CR23
CR24
CR25
CR26
CR27
CR28
A 700
B 900
C 1100
D 1300
E 1500
F 1700
697
770
852
941
1209
1336
10 TT DEC. CKT.
A.R. (TT DEC. CKT.)
R217 10K
K201
Q201
CR205
ON MOTHER BOARD
DATA READY (DISP. CKT.)
S14 CAMA FUNCTION (FRONT PANEL)
MF/MF
MF/DPO
OFF
+5V
+12V
84.5K
R2-A 5K (FRONT PANEL)
2.49K
PULSE WIDTH CONTROL
R50 10K
R8 5.1K
R7 5.1K
CLK (DEC & BUFF CKT. & TT DEC. CKT.)
S12-B AUTO RES T (FRONT PANEL)
AUTO
REMOTE
MAN
CLR
DATA PRESENT
R12 10K
C10, .001
R18 10K, 1%
U24 LM301
Q1 2N3565
U14
U16 74121
U15-B 74123
CR5
C8 .1
C14 .1/10
R23 10K
Q2 2N3565
C7 4.7/35
R10 20K
R11 100K
R15 10K
R16 10K
Q3 2N3565
R14 10K
R19 5.1K
R20 19.6K, 1%
C11 4.7
CR6
R13 31.6K, 1%
C9 .001
U15-A 74123
U23-A 74123
R22 14.7K
C12 4.7
CR7
U23-B 74123
FROM DEC. & BUFF CKT.
KP
ST
CD11 & CD12
(TT DEC. CKT.)
FROM POWER SUPPLY CKT.
+5V
GND
-12V
C13 10/25
C15 .1/10
C16 .1/10
C18 .1/10
C19 1/10
C20 .1/10
TO ALL I.C.
-12V (U24 ONLY)
ST LATCH
CLR (TT DEC. CKT.)
LAMP STROBE (TT DEC. CKT.)
2^0 (TT DEC. CKT.)
2^0 (DEC. & BUFF CKT.)
2^1 (TT DEC. CKT.)
2^1 (DEC. & BUFF CKT.)
2^2 (TT DEC. CKT.)
2^2 (DEC. & BUFF CKT.)
2^3 (DEC. & BUFF CKT.)
2^3 (TT DEC. CKT.)
DIGIT PRESENT (LOOP E & M CKT.)
LAMP RESET (TT DEC. CKT.)
U20-A 7474
U21-A 7474
U20-B 7474
U21-B 7474
I. C. DEVICE TABLE
REF. DESIG. | TYPE | VSS | VCC
U1 | 7427 | 7 | 14
U2 | 7401 | | |
U4,6 | 7400 | | |
U7 | 7402 | | |
U11,12 | 7406 | | |
U13 | 74174 | | |
U14 | 7413 | | |
U17 | 7404 | | |
U18 | 74260 | | |
U19,22 | 7401 | 7 | 14
NOTES: UNLESS OTHERWISE SPECIFIED
1. LAST REF. DESIG. : U24, Q3, CR7, C20, R22.
2. ALL RESISTORS ARE C.C. 5%
3. ALL DIODES ARE IN4446.
DESIGN DEVELOPMENT INC. SUNNYVALE, CALIFORNIA
SCHEMATIC DIAGRAM 500SR SIGNALING SET ERROR DETECTOR & REGISTOR CKT.
APPROVED | DATE
DRAWN CH | 12/10/82
SCALE NONE
SIZE D
DRAWING NO 8346-3006
DO NOT SCALE DRAWING
SHEET 1 OF 1


REVISIONS
LTR
DESCRIPTION
DATE
APPROVED
ERROR GENER. (ERROR DET. & REGIST. CKT.)
FROM LOOP E&M CKT. & ERROR DET. & REGIST. CKT.
TO DISPLAY CKT.
FROM M.F. FILTER CKT.
100
900
1100
1300
1500
1700
TO U10 (TT DECODER CKT.)
LAMP STROBE (TT DEC. CKT.)
LAMP RESET (ERR. DET. & REGIST. CKT.)
ON DISPLAY BOARD
TO ERR. DET. & REGIST. CKT.
KP
ST
CD11 &CD12
FROM POWER SUPPLY CKT.
+5V
GND
TO ALL I.C.
C1 10/25
C2 .1/10
C3 .1/10
C4 .1/10
Q1 2N3565
Q2 2N3565
I. C. DEVICE TABLE
REF DESIG | TYPE | VSS | VCC
U1 | 7404 | 7 | 14
U2,3,4,5,6 | 7410 | | |
U7, 8, 9 | 7432 | | |
U10, 15, 16 | 7432 | | |
U12 | 7420 | | |
U13, 17, 18, 19 | 7400 | | |
U14 | 4078 | | |
U20, 21, 22 | 7406 | 7 | 14
U11 | 7430 | 7 | 6, 11, 12, 14
NOTES UNLESS OTHERWISE SPECIFIED
1. LAST REF. DESIG. USED : U22, R20, C4.
2. ALL RESISTORS ARE C.C 5%
DESIGN DEVELOPMENT INC
SUNNYVALE, CALIFORNIA
SCHEMATIC DIAGRAM
5005R SIGNALING SET
DECODER & BUFFER CKT.
DRAWN CP 12/15/82
SCALE NONE
SIZE D
DRAWING NO 8346-3007
DO NOT SCALE DRAWING
SHEET 1 OF 1



INPUT LOGIC PROCESSOR (U2)					
	DP	SF	NF	TT	1004
SEL Ø	Ø	1	Ø	1	Ø
SEL 1	0	0	1	1	1
1004	0	0	0	0	1

NOTES: UNLESS OTHERWISE SPECIFIED.
1. LAST REF. DESIG. USED: U12, VR103, RN2, DS40, S4, T1, Y1, CR47 R48, C9.
2. ALL RESISTORS ARE M.F. 1%.

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DEC ANGLES	DESIGN DEVELOPMENT INC. SUNNYVALE, CALIFORNIA
APPROVALS DATE	SCHEMATIC DRAWING 500SR OPTION 3(A) SENDER
DRAWN CP 9/27/32	SCALE NONE
DETAIL	SIZE D
	DRAWING NO 8546-3002
DO NOT SCALE DRAWING	SHEET 1 OF 1

DDI's San Jose Manufacturing Facility

85782

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